

TWENTIETH BIENNIAL  
REPORT  
OF THE  
Department of Agriculture  
1928

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NATHAN MAYO  
Commissioner of Agriculture  
TALLAHASSEE, FLORIDA

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## LETTER OF TRANSMITTAL

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DEPARTMENT OF AGRICULTURE, STATE OF FLORIDA,  
COMMISSIONER'S OFFICE

To His Excellency,  
John W. Martin,  
Governor of the State of Florida.

Sir:

As provided by law, I herewith submit the Biennial Report of the Department of Agriculture for the years July 1st, 1926—June 30th, 1928. Owing to the change of the fiscal year from the calendar year to from July 1st to June 30th, this is a two-year report under the new fiscal year.

Respectfully submitted,  
NATHAN MAYO,  
Commissioner of Agriculture.

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## Commissioners of Agriculture of Florida

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### AS REGISTER OF LANDS—

John Beard: January 12, 1847, to May 29, 1849.

David S. Walker: November 23, 1850.

Hugh A. Corley: December 31, 1859, to Dec. 31, 1866.

### AS COMMISSIONER OF IMMIGRATION—

Oscar E. Austin: August 7, 1868.

J. S. Adams: January 14, 1869, to January 16, 1873.

Dennis Eagan: March 4, 1873, to 1877.

Hugh A. Corley: January 3, 1877, to March 16, 1882.

P. W. White: March 16, 1882, to February 12, 1885.

### AS COMMISSIONER OF LANDS AND IMMIGRATION—

C. L. Mitchell: January 29, 1885.

### AS COMMISSIONER OF AGRICULTURE—

L. B. Wombell: December 31, 1888.

B. E. McLin: January 1, 1901, to March 1, 1912.

W. A. McRae: March 1, 1912, to October 31, 1923.

Nathan Mayo: November 1, 1923.

# Personnel of the Department of Agriculture

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NATHAN MAYO, COMMISSIONER

*Miss Anna Belle Wesson, Secretary to the Commissioner*

## AGRICULTURAL AND IMMIGRATION DIVISION—

T. J. Brooks, Chief Clerk and Director, Bureau of Immigration.

Phil S. Taylor, Advertising Editor, Bureau of Immigration.

J. M. Burgess, Clerk.

Bennett T. Mayo, Clerk.

Mrs. Inez Hale McDuff, Stenographer.

Miss Leola Sauls, Stenographer.

Mrs. Vera Leverett, Mimeographer.

## PURE FOODS AND DRUGS, STOCK FEED, FERTILIZER, CITRUS FRUIT AND GASOLINE INSPECTION DIVISION—

J. H. Pledger, Chief Clerk and Supervising Inspector.

R. J. Mays, Clerk and Bookkeeper.

Miss Margaret Walker, Stenographer.

J. B. Wilkerson, Inspector, Pensacola.

D. P. Daniel, Inspector, Marianna.

J. B. Brinson, Inspector, Madison.

Wm. McCarrel, Inspector, Jacksonville.

Nathan Mayo, Jr., Inspector, Ocala.

A. N. Turnbull, Inspector, Daytona.

J. W. Davis, Inspector, Ocala.

J. B. Taylor, Inspector, Tampa.

I. D. Stone, Inspector, Lakeland.

S. W. Clark, Inspector, Punta Gorda.

W. D. Eminisor, Jr., Inspector, Miami.

PERSONNEL—Continued.

LAND DIVISION—

C. B. Gwynn, Chief Land Clerk.  
F. E. Bayless, Jr., Clerk.  
Mrs. L. B. Hopkins, Stenographer and Certificate Clerk.  
Miss Helen Parks, Stenographer.

FIELD NOTE DIVISION—

Miss Bessie Damon, Clerk.  
Will E. Graham, Clerk.

PRISON DIVISION—

T. E. Andrews, Clerk.

SHELLFISH COMMISSION DIVISION—

T. R. Hodges, Commissioner.  
Mrs. Anna Parker, Clerk.  
Miss Elizabeth Rief, Stenographer.  
Mrs. Lizzie Lee Leman, Shellfish Clerk and Bookkeeper.

CHEMISTRY DIVISION—

R. E. Rose, State Chemist.  
Gordon Hart, Assistant Chemist.  
B. Jay Owen, Assistant Chemist.  
Nals Berryman, Assistant Chemist.  
E. Peck Greene, Assistant Chemist.  
Miss Muriel Rose, Clerk and Stenographer.

STATE MARKETING BUREAU DIVISION—

L. M. Rhodes, Commissioner.  
Moses Folson, Secretary.  
Neill Rhodes, Assistant Marketing Commissioner.  
R. H. von Glahn, Marketing Agent.  
Fred N. Reed, Multigrapher.  
E. M. Roberts, Assistant Multigrapher.  
Howard Mueller, Stenographer.

# Can Co-Operative Marketing Do It All?

By NATHAN MAYO

Commissioner of Agriculture

(In Florida Review)

**C**AN the American farmer obtain through co-operative marketing his much-needed "relief"?

How far will orderly selling by producing groups go in stabilizing markets?

Can Florida producers hope to hold up profitable prices permanently by clearing houses and similar organizations?

These questions may well be considered in the light of recent developments in co-operative marketing circles outside of Florida.

In California, where co-operatives have had some years of success, it now appears that trouble is at hand. Growers of peaches, raisins, prunes and some other crops are loaded down by surplus production and are said to be facing ruinous prices. After several seasons of prosperity resulting from collective action in the sale of their products, these California folks are now said to be feeling the weight of their own heavy crops which cannot be sold except at loss. They are reported to be considering heroic measures, such as allowing a large part of the present year's crop to go to waste in order to reduce this surplus to the level of a profitable instead of unprofitable supply.

Up in Canada where they grow vast quantities of wheat, the growers formed a pool and operated it successfully for a number of years. For a while it worked well. Undoubtedly it steadied the price of wheat and did much to prevent sags and gluts in the market. Like the California organizations, it brought cheer and confidence to the producers. Farmers everywhere were looking at these co-operatives with pride and hopefulness. But now we have the report that the wheat pool is in trouble. More than seventy-five million bushels of wheat, on hand as a "carry-over" from last year, was added to this year's large crop, and the two combined proved too much for the market to stand. Low prices, asserted to be lower than the cost of production, resulted, and Canadian and American wheat growers are now figuring their losses.

This experience of our friends in California and Canada is not a new one for co-operatives. The rice growers and tobacco growers of the South have had similar troubles. Both flourished a while until over-production piled up its excess baggage too heavy for them to carry.

In the case of Florida, it may be pointed out that we do not produce crops that can be kept from one season to the next, as



with wheat or tobacco or raisins or cotton. It is true that Florida's chief products are citrus fruits and vegetables, which are perishables and cannot well be carried over. But this fact by no means removes the peril of the surplus. In reality, it only emphasizes this peril since it practically compels the marketing of these perishables as soon as they are harvested. A Florida co-operative with an excess of oranges or of vegetables, unlike a co-operative handling cotton or wheat, would be forced to dispose of this surplus at the same time it was selling the normal amount demanded by the trade. We would not have the chance that a wheat pool might have, viz., to unload the "carry over" at a profit should the year into which it was carried prove a year of low yields. Again, with the Florida citrus grower there would be the added difficulty of controlling annual production, since the citrus crop is not planned or planted for each separate year, but for all the years the groves live and bear.

What lesson can we get from these troubles?

Just this: **CO-OPERATIVE MARKETING CANNOT SUCCESSFULLY HANDLE A SURPLUS SO LARGE AS TO EXCEED ALL DEMAND.**

We must consider the fact that one invariable result of successful collective selling by farmers has always been a marked increase in production. Co-operatives that direct the marketing of seventy-five per cent or more of any crop can and have always, under normal conditions, sold that crop at a price satisfactory to themselves. This far they can serve most helpfully the cause of agriculture. But no co-operative yet brought forth has mastered the vexing problem of **EXCESS or SURPLUS**. It is one of the tragedies of agricultural life that the very agency which has profitably sold a crop of normal size has been the agency which, without intent to do it, has stimulated the production of succeeding crops which were of abnormal size and had to be sold at low prices. There we have the sad spectacle of farm organizations defeating their own ends and thwarting the very purpose for which they were founded.

What can be done about it? The thing that **MUST** be done, if co-operative marketing shall function, is to **CONTROL NOT ONLY MARKETING, BUT AHEAD OF IT, CONTROL PRODUCTION.**

Whether this can readily be done is the **BIG QUESTION LOOMING UP BEFORE CO-OPERATIVES**. It will have to be solved or all of our efforts to help ourselves through organizations will in the end fail. This will apply here in Florida just as it did in California. We had as well face facts. The co-operatives we are to have in our State will give us some **IMMEDIATE RELIEF** and will prove a blessing. But unless our growers by common consent can control production they will not long be able to control prices.



## More About Co-Operative Marketing —Its Possibilities and Impossibilities

By NATHAN MAYO

Commissioner of Agriculture

(In Florida Review)

**H**ERETOFORE in this publication we discussed the topic "CAN CO-OPERATIVE MARKETING DO IT ALL."

In this paper we pointed out some of the troubles which come to co-operatives, calling special attention to the menace of surplus production—an unhappy aftermath of many co-operative enterprises in the past.

Nothing in this article was designed to "throw cold water" upon co-operative effort in Florida or elsewhere, despite the fact that a very few of our friends seem to have so construed it. We are in no sense opposed to this movement—we are in the true sense very much in favor of it. But we still stand upon our position taken in the article referred to: **WE KNOW THAT CO-OPERATIVE MARKETING IS NOT A PERFECT PANACEA FOR THE TROUBLES OF FARMING. IT HAS NOT ALWAYS WORKED SUCCESSFULLY, PARTICULARLY IN THE HANDLING OF THE SURPLUS WHICH IS LIKELY TO FOLLOW IN ITS WAKE.** Here let us quote from C. A. Cobb, editor of **SOUTHERN RURALIST**, who says in an editorial under date of January 1st:

"The best co-operation can do in marketing is to put over an outstanding job of selling the products entrusted to it. And when this is well done, over-production with all its train of evils is not only invited but is inevitable, **WITHOUT SOME MEASURE OF CONTROL.** This is what has happened in California, where co-operation in this country had its birth. If you doubt this, write the raisin growers and the prune growers and any of the rest. Co-operation is no answer to tariff discrimination against agriculture; it is no answer to labor restriction in the interest of higher wages for industrial workers. Co-operation is no answer to the burden placed upon agriculture through the governmentally guaranteed income of industry."

### SOME THINGS A CO-OPERATIVE CANNOT DO

It cannot perform miracles.

It cannot distribute large crops to the market at as high prices as small ones.

It cannot entirely eliminate the middleman.

Controlling only a part of the crop, it cannot dominate markets.

It cannot change human nature or make a good farmer out of a poor one.

It cannot sell all the produce of all its members all the time for a profit (neither can this be done by independent marketing).

It cannot monopolize supply or prevent all competition.

It cannot succeed if a majority of its members are disloyal.

It cannot wave a magic wand and remove all the difficulties in production and distribution.

It cannot change sorry culls No. 3's to A grade or No. 1's.

It cannot make the weatherman co-operate even if farmers limit the acreage.

#### THINGS A CO-OPERATIVE CAN DO

It can standardize and help stabilize production.

It can advertise and widen distribution and develop new markets.

It can improve grade, pack and containers.

It can help to improve distribution between existing markets.

It can buy collectively.

It can finance marketing operations.

It can maintain favorable relations with the trade by conforming to the highest ethics in business.

It can hire men who believe in co-operation and fire men who don't.

It can be a democratic instead of an autocratic movement.

It can employ skilled salesmanship.

It can assemble the commodities and resources of its members.

It can employ expert graders and packers.

It can eliminate competition between local organizations.

It can decrease wasteful practices.

It can more easily secure shipping point inspection.

It can collect claims, improve quality, form pools.

It can help to avoid gluts and famines.

It can make cheaper credit possible.

It can make for co-operative production.

It can make for co-operation in preparation for market.

It can eliminate a large percentage of the middlemen dealing in farm crops.

It can get the grower a quality price when he grows a quality product.

#### BUSINESS DONE BY CO-OPERATIVES IN 1927

With the limitations and difficulties of co-operative marketing ever in mind, Florida producers may well press ahead to the work of building their organizations. With the experience of

hundreds of farm business enterprises to guide them, our people have the best possible chance to construct and guide their own associations so as to become permanently successful.

It is heartening to consider the size of the business transacted by farmers' associations in the United States. A report issued by the Bureau of Agricultural Economics at Washington, D. C., gives us the following very interesting figures relative to the 11,400 co-operative associations listed in the nation:

Grain Associations .....	\$ 680,000,000
Dairy Associations .....	620,000,000
Live Stock Associations .....	320,000,000
Fruit and Vegetable Associations .....	300,000,000
Cotton Associations .....	97,000,000
Poultry and Egg Associations .....	40,000,000
Nut Associations .....	14,600,000
Tobacco Associations .....	22,000,000
Wool Association .....	7,000,000
Miscellaneous .....	200,000,000

Grand Total Business for Year 1927 .....\$2,300,600,000

This huge total of business indicates the tremendous strides the American farmer has made toward the proper management of his own business affairs. Here in Florida we are just beginning. Our citrus, poultry, dairy, truck and general farming groups are in need of sound organization, intelligently directed. The efforts already made toward this end would seem to lend a hopeful outlook to the future. Collective action, directed by intelligence and made vital by loyalty, can, and we believe will take our producers far along the highway of progress.



## Is the Farmer's Case Hopeless?

By NATHAN MAYO

Commissioner of Agriculture

(In Florida Review)

DEAN MUMFORD of the University of Missouri recently stated the case of the farmer as being desperate. His figures showed that farm indebtedness could not be liquidated from farm incomes. His article appeared in the August 20th issue of Florida Review.

If the case is as desperate as he states, what is to be the future of American agriculture? Are the farmers of the future to be peasants in fact? Are we drifting back to "The Man With the Hoe" as pictured by Millet and sung by Edwin Markham? Have we gone in a circle and lifted the farmer from his lowly estate during feudalism to the high plane occupied by the independent American farmer, only to circle back to feudalistic bondage? It is true that agriculture is carrying a heavy debt. So is almost every other kind of industry. It is also true that the average farmer can rent his farm and home for about what a similar home alone will cost in rent in town. It is also true that no man can live in town and hire himself out to work on the farm for a wage sufficient to pay his family board bill in town, much less house rent. It is true that for many years the approximate price indices show that the purchasing power of the farmer's labor is the lowest per day of any class of workers listed among gainful pursuits.

Now, what is to be done about it? First, find out the cause. Second, apply the remedy.

That sounds easy, but it is not. There is no one cause, but there are numerous interlocking causes for the farmer's plight. The consuming power of the world has been so greatly increased during recent years that all kinds of manufactured articles have been put on the market at good prices. This has called forth millions from farms to industrial centers. The fact that more efficient methods of farming have enabled those left on the farm to produce as much per capita as before the exodus from the country accounts for the purchasing power of farm labor per day being lower per hand than before.

When the relative number of people on the farm gets low enough to reduce production to a point below normal consumption, then will the price increase until the purchasing power of

labor on the farm will equal the purchasing power of the average of other vocations.

The few who stand head and shoulders above the average in efficiency of production on the farm are the ones who are making money. If every one on the farm were as good as the best, no one would make anything—production would overtake consumption and pile up a surplus that would throw prices below cost of production.

As was pointed out by Dean Mumford, taxes are unjust to farmers. A man with farm property enough to earn an income of \$4,000 per year would pay several hundred times as much taxes as the salaried man drawing \$4,000 a year. However, the salaried man with nothing but his salary has nothing to leave his family when he dies, while the owner of property, whether in town or country, has the property which earns the \$4,000 to leave as a patrimony. It takes a great deal more of his salary for the \$4,000 wage-earner to live than it takes for the \$4,000 farm-owner to live.

At the rate lands, both farm land and other lands, are being allowed to sell for taxes there will be very little land-tax revenue in a few years in Florida.

Taxes have been a bone of contention since taxes were invented, and always will be. If those in position as statesmen do not realize that taxation that confiscates destroys the government that imposes it, sooner or later, then statesmanship is dead and the end is in sight.

We do not want a peasant-minded people as any part of our population. The only way to prevent it is to have no peasants economically.

It was found years ago, both in Europe and America, that farming could not pay commercial rates for loans nor meet commercial terms as to the length of loans. The Rural Credit Bank, for both long and short time loans, was provided. But in many localities neither of these facilities is available because of the inability of the farmer to comply with the requirements. There should be an extension of this to accommodate a wider scope of farmers.

Efficient marketing is needed. Finding new customers for one product oftentimes crowds out some other product—there is nothing that has not a possible substitute. However, increased consumption per capita is limited only by the power to purchase. Wants multiply as the means are acquired to accommodate them. The writer believes a halt will be called before it is too late in the rush toward general bankruptcy of agriculture. The case may be desperate, but not hopeless. Red-blooded



Americans will not be crowded beyond a given point. The remedies applied will be a shock to some, inevitably; but humanity, justice and self-preservation will demand measures, though drastic, that will place farming on as remunerative a basis as the average of other vocations.

No, the farmer's plight is not hopeless unless this nation is hopeless. This nation is not hopeless unless civilization is hopeless. For if and when the farmer is crushed by the weight of economic injustice, no other part of the republic will stand. He will bring down the temple on which his hands rest.

Civilization must reckon with the man behind the plow. He is the anchor of the republic, the hope of the world. He holds in his hands the material of life. Should he dodge his task one season, famine would sweep off the inhabitants of the planet. Law-makers, take heed, and build prosperity where the fountain of economic life springs from Mother Earth—on the farm.



## Organizing Farmers for Business

By T. J. BROOKS

Chief Clerk, Department of Agriculture

THE farmer is a manufacturer: The soil, atmosphere, sunshine and showers are the material to which he applies his skill, and from nature's laboratory is poured annually into the channels of trade the materials from which is fed and clothed the teeming millions of the earth.

The farmer is a business man: The selling of his surplus is the great paramount source of the world's commerce and trade. He furnishes 600,000,000 tons of food annually to feed the nations of the earth.

The farmer is a consumer of the materials turned out by the great urban industries. He interchanges his products with those of other lands till all the nations of earth are linked together into one stupendous whole.

History is a voice forever sounding across the centuries the interpretations of man. Opinions alter, manners change, creeds rise and fall, but the law of cause and effect is written on the tablets of eternity.

To trace the law of cause and effect in the past for future guidance is a task of civilization. Present conditions are the composite reflection of the operation of this law. Present tendencies are prophetic, and to properly interpret is to be forearmed and empowered to direct the course of history.

The farmer of today is going through a period of transition, economically, industrially and financially. How to adjust his methods, habits, and business to the changing order is one of the difficult problems of the day which he alone can solve.

The consumer furnishes the demand for production. He pays for:

- (1) Cost of production.
- (2) Cost of distribution.
- (3) Profits of production.
- (4) Profits of distribution.
- (5) Waste of production.
- (6) Waste of distribution.

The ability to consume is gauged by the power to earn. When so much of the consumers earning power goes to defray the expense of waste his consuming power is curtailed and the market he can furnish the producer is lessened. It behooves both the producer and consumer to eliminate waste.



The best statistics obtainable inform us that production and distribution are about equal factors in establishing the retail price to the ultimate consumer. We know that this can be greatly cheapened by the producer assuming a larger share in the task of distribution along lines demonstrated to be practical, efficient and economical by the larger distributing concerns of the leading nations of the world.

There are two general divisions of business methods:

- (1) Individual.
- (2) Collective.

The individual method has been followed almost universally from the very earliest to very recent times. The development of modern machinery, the corporation and the trust has eliminated this method in the larger affairs of the business world. There is no individual distribution by those who hire for wages. They do not own the things they produce. The distribution is undertaken by the firm or company owning the output. The workers in a shoe factory think not of marketing the shoes they produce. This is done by the factory owners; not as individuals either but by distributors under the direction of the owners.

The same is true of the manufacture of machinery, furniture, vehicles, mining, etc. A railroad has service to sell but the ones who perform the individual service on the road or trains are not the ones who set the price. This is the work of the corporate body endowed by law with the powers of personal entity.

When farming is done on the bonanza scale the same process of marketing is followed: The individual worker sells nothing but his service; the corporation sells for all the workers and pays a stipulated wage to them.

When the ownership and operation is on the small scale the business is at a serious disadvantage in competing with the larger business, both in power to handle a distributing system and in economy of operation. This brings the farmer of tomorrow face to face with the alternative of collective marketing among the small farmers or gradually retreat before the corporation farmer. The corporation has superseded the individual in all other lines. Even though corporation farming is outlawed it will not do away with the need of collective distribution.

We need only to study the co-operative movement, as it is now progressing on both sides of the sea, to see its possibilities and understand the details of its principles. What we do is mostly a matter of choice but the consequences of what we choose to do are meted out to us with cold precision as destiny swings the pendulum of time.

## CORPORATE BUSINESS

There are three methods of conducting corporate business:

1. The ordinary joint-stock method;
2. The co-partnership or profit-sharing method;
3. The co-operative method.

Let us take them up in the order named and study the essential qualities of each. The process of securing a charter is the same in all three kinds.

The first was originally the only kind organized. This class has but one purpose: the welfare of the stockholder. All net profits are considered the rightful property of the stockholders. The voting power is lodged in the shares. The shareholders may vote for the board of directors or other officers. The voting power may belong exclusively to the holders of common stock or may extend to the preferred stock. It may have both preferred and common or all may be common. It may have a voting board which has all the voting powers. In either case the profits go to the stockholders. Most of our industrial corporations are of this kind. The defense of this type of corporation is that those who assume the risk of failure and have their money invested are due whatever returns the business may net.

The second class of corporations—the profit-sharing—goes one step further and allows a certain percent of the profits to go to the employees in additions to their wages, the bonus to be pro rata, based on the salary or wages or each. This is calculated to tie the employees to the company and encourage the “spirit of the shop” till strikes will be a thing of the past. This plan is calculated to make the employees feel that they are getting a square deal and they will have no desire to destroy the business that gives employment and gives them all that the profits will justify. This plan is coming in favor with quite a few large employers.

The third kind of co-operative corporation goes still one step further and includes the three absolutely essential factors in the operation of any business: the stockholder, the employe and the customer. Neither is more important than the other and neither should have all the benefits of success. In the distribution of profits the co-operative corporation limits the profits that go to the stockholder just as profits are limited to a bond holder. After paying expenses the stockholder is a preferred creditor up to the rate which is established as the rate. Next comes the employes and customers. The employes get a certain percent pro rata, based on the earnings of each. The remainder goes back to those furnishing the business. If it is a mercantile business the refund goes to the

proportion to value of purchases by members. Outside customers get one-half the rebate of members which may be credits till they amount to a share and then a share may be issued. If it is a selling association commissions are charged to cover expenses and a reserve; when this has reached a specified standard the profits are returned to those furnishing the shipments, to each according to the profits yielded by his shipment.

In the control it is usually one man who votes regardless of the number of shares owned. In a few instances the members vote according to the volume of business furnished—so much business counting a vote. The same principals apply whether the articles handled are eggs, poultry, live stock, dairy products, fruit, vegetables, wheat, cotton or what not. Farmers' Exchanges never deal in futures subject to settlement by forfeiture of margins.

#### COPYING THE ECONOMICS OF BIG BUSINESS

All examples of successful co-operative business exemplify the possibility of conducting the distributive end of farming on the same principles that are followed by the big industrial corporations and trusts without the monopolistic extortions for the benefit of a few stockholding exploiters.



## Co-Operation for Various Purposes

By T. J. BROOKS

Chief Clerk, Department of Agriculture

CO-OPERATION has had many interpretations. It may be exemplified in Productive, Commercial, Financial and Social Life. Co-operative undertakings may be based on ideas of material profit only or on ideas of altruism or on a combination of the two.

Social innovations are to be found in every age of the world. However diverse the systems and theories put forward or vaguely expressed, the idea of associated effort runs through them all. Whether expressed by ancient philosophers, as in Plato's "Republic," or by modern thinkers as in Bacon's "Nova Atlantis"; by Moore's "Utopia"; by Harrington's "Oceana"; by Campanella's "City of the Sun." Making experiments in accordance with theories have been frequent during the last half century. Most of these experiments have come to grief. Impractical theories may be so because they are unreasonable or run counter to the public attitude of mind. A scheme may be plausible, reasonable, worked out logically—planned on the assumption that the human family will act rationally—yet fail because human beings so often utterly fail to act rationally. The plan is impractical, though just and reasonable, if it will not coincide with human conduct as influenced by heredity and environment. The Essenes were communists and held all things in common. Christ was of this tribe. The Apostles seem to have followed this plan in their early collaborations. Examples of this kind of co-operative effort have not proven verile, permanent or capable of large growth.

Adam Smith, Malthus, Richardo and Spencer worked out the theory of competition from the economic and individualistic standpoint. Robert Owen, "the father of co-operation," gave experimental expression to a means of escape from the evils of competition by means of association on mutual terms industrially. Dissatisfaction with existing conditions has provoked various schools of thought which involved radical changes in the social structure.

General economics treats of man's temporal well-being; of production, distribution, consumption and agencies controlling each. Pure economics is the science of value, price, exchange and markets. National economics has to do with governmental policies and operations. Dynamic economics is prophetic as it

deals with economic tendencies as contrasted with conditions. Rural economics relates to the production, distribution and use of agricultural wealth and the forces of rural life. Urban economics covers the field of urban activities in industry and trade. Social economics concerns problems of organized society as it exists and in its potentialities. Political economics generalizes all branches, with special reference to the influence of government on industry and society.

Social science or sociology treats of the origin, history and evolution of society; of ethnological forces, progress of civilization and laws controlling human intercourse; the development of government, marriage, law, custom, land-tenure, caste and privilege; of domestic and international social phenomena.

Co-operation is a phenomenon of social development. It may come from (1) mobilization of a religious sect brought about by persecution from without; (2) a fraternity; (3) a revolt against economic conditions; or (4) constructive efforts to escape unsatisfactory economic conditions.

We see the first exemplification in the religious colony; the second in the numerous fraternities with which we are all familiar; the third group is seen in the labor unions, such as the Knights of Labor, the American Federation of Labor, the miners' unions, etc., and the Farmers' Alliance, the Grange, the Farmers' Union, etc., the fourth group is exemplified in the co-operative enterprises for purposes of production, distribution and finance.





# Rural Credits in Foreign Countries\*

By T. J. BROOKS

Chief Clerk, Department of Agriculture

## EUROPEAN BANKING SYSTEM

### I. Commercial.

Governmental.

Private.

### II. Co-operative and non-co-operative credit systems.

#### 1. Land loans.

Landschaft:

Is merely a syndicate of land owning borrowers; supervised and regulated by the government but operated by the members; makes long-time loans on mortgages; all land mortgages pooled and bonds issued on them; bonds sold on open market; loans repaid by amortization; both limited and unlimited liability, with the former tendency; the Landschaft, as are all other European co-operative associations, exempt from taxation; loans to members only.

#### 2. Credit Foncier:

A non-co-operative, centralized institution, patterned to a large extent after the Landschaft; government appoint principal officers as well as supervising and regulating same; debentures issued on collection of mortgages; short time loans and long time loans made, the latter being repaid by amortization; loans repaid at the option of the borrower and equal amount of debentures recalled; limited liability.

#### 3. Credit Agricole:

Created by the government in 1899; its organization consists of the regional banks and the member societies; membership subscribes capital and Bank of France furnishes free five times this amount, which is lent back to the members on long time land loans.

#### 4. Direct government loans:

Government of Denmark furnishes \$9 to every \$1 of the farmer's; England bought the big estates in Ireland in order to sell them back to the small holders; New Zealand also.

\* For Treatise on Co-operative Credits in United States, write to State Department of Agriculture for Bulletin on this subject.

## III. Personal credit.

## 1. Rural.

## Raiffeisen:

Local, independent, rural, co-operative, credit association; funds for loans come mainly from deposits; the security is mostly character, less often, other collateral; loans average \$100; use of same must be meritorious; management is gratuitous; operates in a restricted area; has marked social merits.

## 2. Schulze-Delitzsch:

This type of bank is agricultural; has shares the same as commercial banks and intended for short time personal credit to farmers.

## 3. Credit Agricole:

Short time loans made on personal credit without the amortization feature.

## IV. Metropolitan.

## 1. Schulze-Delitzsch:

Same as Raiffeisen except: absolute business management; is an urban bank—co-operative; has capital stock; declares dividends; has paid officials; its credit is either a loan or a discount on a trade bill of exchange; loans are either straight loans or credit limits within which a borrower may draw.

## 2. Credit Foncier:

Makes loans to municipalities, corporations, and workers, in certain industrial pursuits.





## Farm Taxes Discussed Before Bankers' Association

**T**AX RELIEF for farm lands, through adjustments basing taxation systems on ability to pay, coupled with the recognition that capital values of the farm must reflect earning power rather than inflated prices for real estate, were the chief points for farm betterment stressed by Dean H. L. Russell, of the University of Wisconsin College of Agriculture, in an address recently delivered in Philadelphia before the American Bankers' Association convention discussing the farm situation.

Dean Russell, nationally recognized as an authority on farm economics, said that present land values may be taken as representing the maximum of deflation, but that agriculture will have to recognize they cannot be expected to return again to anywhere near war-time levels. Future success of the farmer, he said, lies in improving his labor income rather than in the unearned increment due to advance in the price of his farm.

### NO UNIVERSAL PANACEA

"There is no universal panacea for the agricultural troubles for the fundamental reason that American agriculture is not a single industry. This country, spanning twenty-five degrees of latitude, is as diverse as Europe. No one thinks of securing a solution to Italy's problems equally applicable to Norway's ills.

"Before election the political medicine vendor is abroad with his wares promising relief for all troubles through legislative cures. If the farmer is in economic distress, the 'doctor' surely has a liniment that might do some good, so the patient is induced to grab it and try it.

"A basic difficulty with agriculture is a lack of adjustment between what is produced and what is consumed. Most people consider the problem is generally one of over-production, and this is often the case, but under-consumption is likewise potent in producing a surplus. When both these forces pull in the same direction the effect is materially heightened.

"Agriculture deals with consumer demand for food, but is definitely limited in its possibilities of expansion when compared with consumer demands for raiment, shelter or recreation. Advertising can divert attention from one food to another, but if an apple a day keeps the doctor away, it means less orange juice used.

"I wonder if we really appreciate how food habits are changing. 'Slenderizing,' so fashionable in certain circles, is materially reducing per capita use of food with a large group of the population. The stream line waist is bad for the American farmer. Congress ought to do something about it. Either of the political parties overlooked a good chance to put a plank in its platform making this an issue for the present campaign. The farmer vote should have been solid for the man who had such an appealing platform.

"In the main, food requirements are directly related to population increase. But agricultural production in recent years has piled up faster than ever. The total food supply produced in the last four years has been 14 percent greater than it was for the four-year period from 1917-21. During this period population has increased less than 9 percent. In other words, increase in food production has outrun population expansion by 50 percent. Yet this increased production and resulting surplus was grown on 13,000,000 less acres in 1925 than were used for the crop of 1919.

#### WIDE COST OF PRODUCTION

"Probably in no field is there so wide a range in cost of production as in farming. Cost of production between different farmers living under the same conditions will often vary from 50 percent to 100 percent. Such a range in most lines of business would put a concern in the bankruptcy courts. The farmer, however, hangs on longer because he cannot unload on someone else and if compelled to he can take a lowered standard of living.

"Many people lament the constant shift of the country population to the city, and regard this as an index to a decline in agriculture. Such a conclusion is far from being justified. Farm population decreased about 6 percent from 1920 to 1925, but the machine has more than replaced this human brawn, and would one say that it was necessarily to the detriment of the farm? If increasing efficiency in man power output is a measure of business ability it cannot be said that American agriculture has sunk to a lower level than it earlier occupied.

"The improbability of controlling crop production by any concerted means on the 6,000,000 farms of America is so great no one as yet has been wise enough to work out a satisfactory plan. The lumber, oil and coal industries have found restrictive measures of a voluntary character difficult to maintain. If business were definitely to control production by agreement, it finds itself in conflict with the government under the law

forbidding combinations acting in restraint of trade. The inexorable laws of an economic character ultimately will prevail, and unless surpluses can be consumed or prevented from occurring, disaster impends.

"Some of the factors governing production are well within the control of man. Hence if he does not exercise good judgment in this regard he has no one but himself to blame. The stimulus to over-produce because of high prices is the tendency that is most difficult to control, yet this is where the majority of the farmers suffer the most. If prices of any product are above normal, the inevitable tendency is to expand operations. Where each individual acts separately under the same economic stimulus, the mass effect is an expansion in acreage that cannot but react disastrously.

"The government tried to impress caution on the potato growers this spring. In spite of direct warning, the national increase in acreage was nearly 350,000 acres. The American potato grower now finds himself smothered with a prospective crop estimated at over 466,000,000 bushels. The market is opening at not enough to cover costs of production. Probable total value of this enormous crop will be \$100,000,000 less than if there had been unfavorable season in which 50,000,000 bushels less had been grown.

"How is it possible with millions of growers scattered over the forty-eight states to meet a situation in which the hazards of weather bulk large? Some economists have suggested that a federal farm board can control the weather which may exert even a more potent influence on production than the difference in acreage? Even Congress cannot legislate so as to out-manuever the weather.

"The government did all that it could do when wide publicity was given to the statistical situation as shown by the 'intention to plant' census, and yet last year a move developed in Congress to stop the government from publishing forecasts of production with reference to cotton. Somebody did not want too much information given the public about the total crop prospects.

"Orderly marketing may be offered as a help. Co-operative endeavor has been put forth as a panacea but no formula can be blindly followed on the assumption that it is certain to lead to the promised land.

"Instead of over-production at present there is actually a shortage in certain staple food products. Certainly surplus production cannot now be said to exist in the live stock industry with beef at the highest price since the war. With dairy cattle

bringing the highest price since 1920, with stocks of condensed milk the lowest of any period but one in the last eight years, the outlook for the old dairy cow does not appear so very bad. No one is now suggesting a McNary-Haugen bill to remedy this situation.

"The recent price decline in wheat has been accentuated by the unusual percent of the crop thrown on the market by extensive use of the harvester combine. This has made possible early as well as extensive marketing. Did you ever stop to think what a revolution in the use of land has come from the widespread employment of the motor? The replacement of horses by tractors and other motor equipment has reduced the use of land for the production of feed for horses by about 10,000,000 acres. The released acres must be put to use if they are to bear the burden of taxes, of interest and the like.

#### SOME WAYS TO HELP SUGGESTED

"I shall venture to indicate some ways which might serve to equalize the status of the farm with other phases of industry and business. Some of these suggestions would require legislative and governmental action before they could be made effective, but all of them first require the development of a body of public opinion that can only be brought about by frank discussion.

"With all of the discussion on the subject of curtailing further expansion in crop area, agitation still continues for more governmental reclamation projects. The halls of Congress resounded last session with new proposals for additional federal projects that would bring into use hundreds of thousands of acres of desert land and incidentally cost the treasury only \$100,000,000 or so. Congress might refrain from further reclamation until population needs warrant development. Drainage enterprises have also been developed far in advance of economic needs.

"One of the most effective ways the hands of farm leadership could be strengthened would be a non-political, non-emotional critical study of the problems of taxation, with the object in view of placing this important and necessary attribute of government on a sound and modern basis. It is a fair question to ask whether the relation between taxes now levied on income throughout all of the states of the Union is properly correlated with those levied on real property. Eighty percent of all taxes paid in the United States is paid by real estate.

## WEIGHT OF TAX BURDEN INCREASED

"When land values were rising steadily the burden of taxation was not disproportionately severe, but with the terrific deflation which has occurred within the last decade in farm real estate, the crushing weight of the land tax burden has in many cases now become unbearable. The ratio of land tax to the cash rent of farms formerly was about 1-10 to 1-8 of the rent received, but it has now risen in many places to 1-3 and even 1-2 of the income. Rapid increase in tax delinquency in practically all agricultural states shows how the weight of this tax burden has been increased. In a recent study of the income tax in Wisconsin we found that three times as large a proportion of the net income of farmers was now required in taxes as were required of city dwellers.

"The great trouble with the tax on real property is its relative inelasticity. It does not rise and fall with the income from land or the assessed value of property. Much as the politician is willing in his pre-election promises to tell his constituents he is in favor of a reduction in taxes, it is not at all likely that less money will be spent on schools and roads than in the past. These two major items take about two-thirds of the taxes raised.

## BANKERS CAN HELP

"No more statesmanlike step could be taken by the American Bankers' Association with its 21,000 members, which includes the financial leadership of America, than to put its shoulder to the wheel to solve this tax problem wisely. What is needed is a non-political study of the whole field with the end in view of recognizing that greater justice and equality will come by transfer of a larger proportion of real estate taxes to other types of taxation. Whether this should be borne by income directly, or through a consumption or sales tax which indirectly comes back upon income, only a careful, unbiased analysis would determine. Some day America will solve this problem in the light of twentieth century ideas. Must progressive America wait for an agrarian revolution before we drop the tax methods of the days of Washington and Jefferson and line ourselves up with those countries that are industrially in our class?

"One of the main expenditures that is made from public taxation is due to the maintenance of our schools, and there are but few who would gainsay this item of expense. The country school with its wide range and smaller attendance finds it increasingly difficult to meet the advanced steps that a progress-



sive system requires. Steadily have taxes for such schools grown heavier until the burden has called beneath the yoke.

"The tremendous variation in the assessed valuation per pupil in one district compared with another shows the injustice of expecting each local school to bear in the main the burden of its own schools. In my state one country school had a valuation of only \$3,300 per pupil, while another rural district having exactly the same number of scholars had over \$52,000 of assessed wealth behind each pupil. An equalization of these school taxes over a larger assessment basis has been put into operation in a number of states. An educational equalization tax is raised, sometimes on the basis of a general property tax, sometimes from income, and in some cases as a sales tax on luxuries, relieving the school burden in the less populous and poorer districts.

"Education is a state-wide or even a nation-wide problem. We who live in the city are directly concerned as to the kind of education that the country boy and girl is to get for the chances are that our next door neighbor will in a few years be one of those same country boys. Educational facilities should be as uniformly distributed as possible.

#### OVER-CAPITALIZATION A HANDICAP

"One of the heaviest handicaps industry may suffer from is over-capitalization of its plant. In farming the charges imposed through a rise in land values laid an exceedingly heavy burden on this industry. In the tremendous inflation of the great war all normal conditions vanished and sky-rocketing prices led to an orgy of speculation that rivaled the hectic periods in Wall Street. Farm prices were marked up overnight on the basis of the earning power of the moment only. The man who owned his land and was perhaps out of debt was lured into the maelstrom of speculation to borrow money and buy adjoining farms.

"This condition started much of the financial embarrassment of the agricultural West. With interest to meet on mortgages as well as taxes when deflation in prices occurred a man's labor income dwindled to nothing or went to the red side of the ledger. It was then that trouble in agriculture began to be acute. Delinquent interest began to pile up. Taxes were more difficult to meet. The banks and other loaning agencies began to be congested with frozen loans.

"Agitation for legislative relief grew more and more insistent. The politician with his ear to the ground quickly heard the rumblings of discontent, and scheme after scheme was

launched in the halls of Congress as a panacea for the troubles of the farmer.

"Financial burdens increased. Farm bankruptcies rose as never before. Tax delinquencies multiplied many fold, and in many localities land values have fallen to pre-war levels and even less.

"The interest of the non-agricultural class in this financial picture has taken on a new aspect mainly for the reason that a larger and larger proportion of increasing farm indebtedness has passed into the hands of city people. The current value of invested capital in American agriculture is almost \$59,000,000,000, with but \$32,000,000,000 actually owned by farm operators. Twenty-seven billions represents the financial stake that the outside public now has in American farms. Prior to the war inflation in 1910 the estimated obligations of farmers in the hands of the public was only \$16,000,000.

"The investor in land mortgage securities has had no end of trouble and loss in liquidating his land mortgages and bonds. Bankers have individually told me that their main interest in some of the proposed relief measures was the hope that the Congressional pulmotor might inject enough life into the body of agricultural finance to enable what they feared might be a corpse to be brought back to life, and thus give them an opportunity to get out from under before the patient had a relapse, but agriculture is suffering from basic conditions that need more than pulmotor treatment.

#### EARNING CAPACITY AS BASIS OF VALUE

"American agriculture may have to recognize that it is futile to expect farm land valuations can wisely again approach war-time levels. The only sound basis of value is stabilized earning capacity. Ultimately and permanently land values must reflect the relative profits after fixed charges are met. This is the basis on which all other business is conducted and agriculture can neither expect nor demand any other policy as a permanent method. Railroads and factories not infrequently have to undergo a financial reorganization in which the capital structure has to be reduced to what the business can actually earn.

"Leaders who have to look to political future will not be willing to advocate the wisdom of such drastic treatment. But it would mean much for the permanence of American agriculture if we could get out of the public mind the idea that agricultural prosperity is dependent in a large degree on marking up the price of land. Will not profits in farming be increased



more with a lower land valuation based on earning power than from an inflated level of land prices? Such deflation would in time aid materially in a reduction of the tax on real estate.

"The future success of the farmer lies in improving his labor income rather than in the unearned increment due to advance in price of his farm. More and more the farmer's return will rest on what he has for his labor and less on the income he receives from property.

"When capital is secure it is willing to take lower rates of interest. The government already has gone far to give the farmer an opportunity to get his needed financial help at a lower rate than most other lines of business enjoy. Only government itself through its various political units can borrow money now as cheaply as can the farmer.

"Present land values may doubtless be taken as representing the maximum of deflation. The decline has run its course. In all probability there will never be another opportunity in our lifetime to buy land as cheaply as can be done at the present time.

"With reasonably cheap money where interest charges have to be met; with reasonable adjustments in taxes that are sufficiently elastic in their imposition to meet the fundamental principle that the cost of governments should be met primarily on the basis of ability to pay; with a capital structure that reflects earning power rather than inflated and unearned increment in property values, the human element in farming is in a better position to enjoy the fruits of its labor on the basis of a better labor income, just as the human equation in the industrial world has within the last decade received relatively a higher reward for its service than was formerly its wont."



## Utilities Have Faith in Florida

**Investment of More Than \$160,000,000, Mostly by Northern Interests, Based on State's Future**

(Wall Street Journal, Dec. 17, 1927)

FLORIDA enthusiasts point to the development of their public utility industry as one proof of Northern confidence in the future of the State. At present there are four main companies operating in Florida, all controlled by Northern capital, and three of them subsidiaries of large and successful electric systems. The companies are: Florida Public Service, Florida Power & Light, Tampa Electric and Florida Power.

Physical properties of these four companies were carried at \$147,500,000 on their December 30, 1926 balance sheets, at which time combined assets were \$166,300,000. The noteworthy feature of this large investment is that all but about \$10,000,000 of it has been made by Northern interests in the last four years. It is significant that these companies have spent well over \$60,000,000 in new construction alone in the last three years.

This capital was not attracted to Florida by a boom which might ultimately prove to be only a flash in the pan. Rather, it was attracted by the future possibilities of the State, and no investments were made without analysis by engineers and utility experts.

### FLORIDA POWER EXPECTED DEFLATION

The attitude of the utility companies is well expressed by S. R. Inch, president of Florida Power & Light Co., largest utility company in Florida, who said in the 1926 annual report of that company: "The management of this company has been perhaps as intimately connected with the development of the State of Florida as anyone within the past three years. At all times it expected the deflation which occurred in real estate values and was surprised only that it was so long deferred. The company's construction program consequently was undertaken not on the basis of inflated values in real estate but because Florida, in addition to and entirely apart from its attractiveness as a winter resort, possesses many large and varied potentialities as an agricultural and horticultural state and as the source of valuable raw materials for industrial and manufacturing purposes. The management of this company confidently expects the develop-

ment of the State to continue along these lines and proposes to maintain the company in such a position as will permit it, at all times, to provide adequate service for its important and rapidly growing territory."

### UTILITY INVESTMENTS

The extent of public utility investments in Florida is shown by the following table, based upon figures as of December 31, 1926:

	Fla. Pub. Svc.	Fla. P. & L.	Tampa El. Co.	Fla. Pr. Co.	Total
Prop.....	\$11,473,592	\$104,410,282	\$13,567,326	\$18,064,578	\$147,515,778
Tot. assets.....	13,128,044	117,274,534	15,507,337	20,393,711	166,303,626
Represented by:					
Fd'd debt.....	7,867,550	64,000,000	1,184,000	9,942,000	82,993,550
Pf. & Com.....					
Stocks.....	4,077,029	44,996,655	568,600	3,649,450	53,291,734
Surplus.....	319,657	2,191,592	11,931,800	2,776,138	17,219,139

That the above investments have been wisely and conservatively made is shown by the earnings of the companies. Despite the business and financial depression that has followed the bursting of the land speculation bubble, all companies have reported earnings sufficiently high to cover interest, sinking fund, depreciation and preferred dividend requirements and leave considerable balances for common stockholders and surplus. While both gross and net earnings generally have shown a tendency to fall off this year as compared with 1926, the decreases have been slight and the major portion of increased business resulting from the rapid development of Florida since 1924 has been retained.

Earning statements for all four companies are available only for the full year 1926, and are as follows:

	Fla. Pub. Svc.	Fla. P. & L.	Tampa El. Co.	Fla. Pr. Co.	Total
Gross.....	\$1,673,249	\$13,101,520	\$4,871,520	*\$2,562,185	\$22,208,474
Net op. inc.....	637,197	4,878,326	1,830,221	1,504,690	8,850,434
Other income.....	176,082	1,232,240			1,408,322
Total income.....	813,279	6,110,566	1,830,221	1,504,690	10,258,756
Interest, etc.....	457,746	2,359,765	77,981	539,075	3,434,567
Net for div.....	355,533	3,750,801	x1,752,240	965,615	6,824,189

\* Includes "other income." x Before depreciation.

The above figures show that net operating income of the combined companies was approximately 40% of gross, a showing which compares favorably with leading public utility companies in the country. It also shows that in every case interest requirements were covered by ample margin.

## FLORIDA PUBLIC SERVICE

Florida Public Service Co., a subsidiary of General Gas & Electric Corp., operates in the central part of Florida in the so-called lake district. It serves a population of about 86,000 with electricity and about 30,000 with gas, in addition to which it does an extensive business in ice and water. The company's system is interconnected with 332 miles of high-tension transmission lines, further supplemented by more than 575 miles of distribution lines. Plans call for additional lines which will tie in the Benson Springs plant with the Lake Wales plant.

From 1924 to 1926 property account was increased by \$7,600,000, or approximately 200%. Results of these expenditures, in output and revenues, are shown in the following table:

	12 mos. ended Oct. 31, 1927	1926	1925	1924
Electricity sold, k.w.h.....	17,005,218	16,553,030	7,378,981	4,287,399
Gas sold, cu. ft.....	151,668,000	144,135,000	86,896,600	47,771,816
Ice sold, tons not available .....		30,300	42,873	29,100
Gross operat. revenue.....	\$1,842,141	\$1,673,249	\$1,059,357	*\$787,739
Net for dividends.....	292,660	355,533	80,967	57,325

\* Includes "Other income."

While fixed charges show a material increase over 1926, earnings were sufficient to cover all charges and leave enough to cover preferred dividend requirements about twice. Gross earnings are holding up despite generally unsatisfactory conditions. October gross having been \$141,503, or 6% above the same month in 1926, while operating income of \$60,247 was nearly 18% above October, 1926.

The largest utility company in Florida is Florida Power & Light Co., subsidiary of American Power & Light and run under the supervision of Electric Bond & Share Co. Incorporated in December, 1925, it is impossible to show comparative statistics over any extended period. Expenditure of around \$40,000,000 in 1926 and 1927, following an extensive expansion program in prior years, has increased the gross income of constituent companies from \$3,823,906 in 1922 to \$12,771,387 for the 12 months ended October 31, 1927.

Florida Power & Light is now an interconnected system with more than 1,000 miles of high voltage transmission lines. It is estimated it serves a population of 482,000, with about 100,000 electric consumers.

The growth of Tampa Electric Co. is discussed elsewhere in this issue. Tampa Electric is the only one of the four companies whose common stock is not held by a parent holding company.

Florida Power Co., the fourth of the companies mentioned,

is a subsidiary of the Tide Water Power Co., in turn controlled by the National Public Service Co., United Gas Improvement Co. and others with a substantial investment in National Public Service have recently sold to the Insull interests of Chicago. Florida Power Co. operates mainly around St. Petersburg. Like Tampa Electric Co., it operates as a separate entity, and is not part of a large interconnected system. Few figures are available, the company being a consolidation, in 1927, of the Pinellas County Power Co., successor to St. Petersburg Lighting Co.

The Florida utility companies have solved their fuel problem chiefly through use of fuel oil, available at low prices and in quantity because of the nearness of the west coast of Florida to the Texas, Mexican and South American oil fields. Most of the companies have equipped their plants to use either coal or fuel oil. Water power as a source for electrical development presents few possibilities in Florida because of the low altitude of all Florida land.





## Growing Tung Oil at Home

BY ORLAND KAY ARMSTRONG

(Nation's Business for April, 1928)

**A**BOUT twenty years ago, tung oil was introduced into this country on a commercial scale for the manufacture of waterproof varnishes. It was found that such varnishes, when dry, would not turn white when wet with water, and it was found that their drying time was superior to varnishes made with linseed oil and that their weathering properties were often better than the latter type.

Unfortunately, however, all tung oil came from China.

Tung oil came from away up the Yangtse river, far in the interior, where coolie labor ground the nuts, extracted the oil, and prepared it for exportation. Inquiries about the tung oil industry were met by stoical rebuffs on the part of the Chinese growers. The process was a secret and would remain so.

### EXPERIMENTS WITH TUNG TREES

But Uncle Sam's energetic agricultural experts, through the consular service, got hold of a number of tung trees and set them out experimentally, here and there, in various parts of the United States. That was twenty years ago. Those twenty years have shown that tung trees can be grown successfully and profitably in this country, and just where they can best be grown. Late this summer the first crop of tung nuts will be gathered from the first large tung grove in America.

The trees must have warmth and rainfall. Fifteen degrees is the lower limit of temperature and 30 inches the minimum of rainfall. Hence the selection of Florida, particularly the north central section, for the production of tung groves on a large scale.

Meantime the Chinese "secret" processes of tung oil production have been observed and found to be crude methods of oil extraction used perhaps since the beginning of the industry some thousands of years ago. The tung nuts are gathered, heated in pans, and ground up in primitive stone grinders by hand. The meal is then put in bags and these bags placed in splits of great logs. Flat stones are placed about them and wedges driven to press the oil from the meal.

## PRIMITIVE METHODS

The oil is collected in pans and allowed to settle. Coolies carry it from 25 to 100 miles to the river, where it is carried in boats several hundred miles down to the point of exportation. At least 20 percent of the oil is left in the meal, and much is wasted.

American official observers saw with amazement the many uses the Chinese has for his tung oil besides the manufacture of paint and varnish. He waterproofs his boats with it. He uses it to mix with shavings to make roofing material. He uses it on silk, raincoats, paper, and a long list of articles where waterproofing is desired. Marco Polo, in his memoirs on Chinese travel, mentions tung oil and its uses.

When the demand for tung oil grew so urgently a few years ago and the paint and varnish trade was trying frantically to obtain more oil, the Chinese growers were given opportunity to install American machinery of the most efficient type to turn out oil quickly and in greater quantities. But they would have none of it. A superstitious dread of modern methods prevented any change from the slow and wasteful process of old.

This state of affairs convinced American experimenters that tung tree groves should be set out in this country and production begun in earnest.

B. F. Williamson of Gainesville, Florida, an authority on vegetable oils, formed the first large company for the growing of tung trees in America.

In 1923 the first large groves were planted in Florida. To the 3,000 acres of bearing trees will be added 1,000 acres more each year until production has made at least a measurable approach to the demand. Representatives of the paint and varnish industry have watched with great interest the growth of these groves.

## MACHINERY VS. COOLIES

To the objection that the American producer of tung oil can not compete with the cheap labor of the Chinese coolie answer is made by Julian Arnold of Peking, who says that one standard American press will do the work of a hundred Chinese laborers. The groves are equipped with gasoline tractors which do the work of cultivation quickly and effectively.

Comparative figures on the probable yields from tung oil groves in comparison with linseed production shows an interesting contrast in values. Linseed, under some conditions, may

produce only about 9 to 12 bushels per acre, which may represent a money value of probably less than \$12.

It is believed that an acre of tung oil trees, when fully developed, will show a yield of at least \$50 per acre, although their suggestions are based upon the yields obtained from very carefully grown individual trees.

From 109 trees last year on one grove in Florida, the first one to bear commercially, a yield of 1,020 pounds of oil was obtained.

Comparison with the Chinese product showed American grown oil to be of a lighter color and higher quality. Time and the hard-working tung growers will bring quantity in this beginning of an important American industry.



## Crotalaria as a Florida Soil Builder

### Gives Good Results as a Leguminous Crop

By W. E. Stokes and W. A. Luekel

IN 1909 the Florida Agricultural Experiment Station, co-operating with the Forage Crop Office of the United States Department of Agriculture, introduced a leguminous plant which today ranks high as a soil improver for the poor sandy soils of Florida. Various species of this plant, crotalaria, have been tried out but the most promising ones in Florida are crotalaria striata and crotalaria sericea. These crotalias grow to a height of 4 to 6 feet. They both have yellow flowers. The crotalaria striata leaf is three parted or trifoliate, while the crotalaria sericea leaf is one bladed or simple. Seed of crotalaria striata are brown to olive green in color and about the size of cleaned beggarweed seed, while seed of crotalaria sericea are black in color and twice as large as crotalaria striata seed. The principal difference between the two species is in the habit of flowering. Crotalaria striata starts flowering about 60 days after germinating and flowers continuously until killed by low temperatures, while crotalaria sericea starts flowering later, but puts on all its flowers during a definite period. Both are killed by a temperature of 28 degrees F.

In various tests at the experiment stations at Gainesville, Lake Alfred, Quincy and Belle Glade, and co-operative tests in different parts of Florida, it was found possible to grow crotalaria successfully on any soil in the State except the raw peaty lands of the Everglades.

Crotalaria may be sown from March to June. Early seedlings generally produce a more satisfactory cover crop to compete with weeds. Rates of seeding vary from 5 to 20 pounds per acre. The heavier rates of seeding produce heavier stands, a finer quality of top growth and a larger yield per acre. Lower rates of seeding produce a top growth of coarser texture but yield a larger quantity of seed. Five to 12 pounds of seed per acre is sufficient to produce a good stand which will yield enough seed for a thick volunteer crop the following season. The seed may be planted broadcast or in rows. Both methods give good results. No inoculation is necessary. Thorough preparation of the land and shallow covering of the seed are recommended.

Crotalaria seed may be harvested when mature or allowed

to fall upon the ground to produce a volunteer crop the following season. It has been found to yield as high as 125 pounds of seed per acre. If grown for seed, planting in rows assures a higher production. The seed may be threshed by hand, with a flail or with a pea huller. Seed will shatter after they mature if left too long.

Crotalaria may be mowed once a year, just before blooming commences, to prevent it from becoming too coarse. The plants should be cut from 8 to 10 inches from the surface of the ground. A second top growth will then soon follow and produce enough seed for a volunteer crop the next year. Cutting the plants close to the ground results in a poor second top growth or none at all.

Crotalaria, when grown on Norfolk sandy soil and harvested as a hay crop, has produced one-third more in pounds per acre than Brabham cowpeas, twice as much as bunch velvet beans and three times the yield produced by beggarweed. Its hay is of a coarser texture when these larger yields prevail. Its value as a feed crop is still in the experimental stage.

As a soil improver for Florida, it has given better results than other leguminous crops. The percentage and quantity of nitrogen in crotalaria is as high as or higher than in any other leguminous crop depending on the stage of growth. This high percentage of nitrogen coupled with the large yield of top growth has produced from 83 to 207 pounds of nitrogen per acre in tests carried out at the Gainesville and Lake Alfred stations. The greater part of this nitrogen is fixed from the air by the nodule bacteria on the roots of the plants. Turning under this high nitrogen crop not only increases the available nitrogen in the soil but also adds to the humus content of the soil. When compared with other green manure crops turned under, crotalaria produced 3,000 pounds more organic material per acre.



## The Life of an Automobile

(Literary Digest)

The results of a study to determine the normal life history of automobiles are given in a bulletin issued recently by the Bureau of Business Research of the University of Michigan. The study was conducted by C. E. Griffin, Professor of Marketing at the University, says a reviewer in Roads and Streets (Chicago).

The method employed was to take a sample of cars of the 1923 registration and, by comparing it with a sample of the 1924 registration, determine the "death-rate" for cars of various ages in the intervening period. The study was made on automobiles in the State of Michigan. It happened that in 1923 and 1924 the registration authorities of Michigan obtained from automobile registrants the year-model of the car registered as well as other data; and they have published in some thirty-five volumes (1924) the license number, name and address of owner, make of car, and year of manufacture. Employing this source of information, a sample of 41,641 cars was taken from the 1923 reports and 49,245 from the 1924 reports. The total number of cars each year-model in the two registration periods, as indicated by the samples were then compared.

The following conclusions are given by Professor Griffin in the bulletin:

1. The mortality rate for automobiles follows a curve similar in form to that for human lives and for various types of industrial goods.

2. The average life of motor vehicles generally is 7.04 years.

3. The average life of Ford cars is substantially longer than the average life of all other cars as a group.

4. The average life of automobiles has shown a definite though not a steady increase.

5. The rate at which automobiles of a given year's production are eliminated from use is indicated by the following facts: of any given 100,000 cars placed in use, 75 percent will still be in use at the end of 4.75 years, 50 percent at the end of 6.94 years and 25 percent at the end of 9.2 years.

6. The normal "expectation of life" for cars of different ages is as follows: for new cars it is 7.04 years; for cars 3.5 years of age, 4.27 years; for cars 6.5 years of age, 2.8 years;

for cars 9.5 years of age, 1.8 years; and for cars 12.5 years of age, 1.2 years.

7. On December 31, 1924, 93.1 percent of the cars produced in the preceding five years, 76.9 percent of those produced in the preceding ten years, and 71.3 percent of those produced in the preceding fifteen years were still in use.

8. The average age of the cars in use on December 31, 1924, was 3.07 years.

9. The replacement demand has shown a marked increase both absolutely and relative to the total demand. This tendency will continue. It is predicted that the replacement demand of 1926 will be 1,796,000 cars, of 1927, 2,063,000 cars, and of 1928, 2,341,000 cars. This increase in replacement demand means that the automobile market is approaching a stabilized condition.

10. At a rate of production of 4,000,000 motor vehicles a year, (last year's total was 4,480,000) and exports of five percent of production there would be in the United States in 1930 a total of 25,580,000 such vehicles, or one for every 4.3 persons of the estimated population of that year.



# PLANTING TABLE FOR FLORIDA TRUCK CROPS

Florida Grower for September, 1927.

General Instructions for the Commercial Production of Vegetable Crops.

**A**LL truck crops listed in this table are produced in commercial quantities by Florida farmers. Such crops as beets, turnips, radishes, spinach and cantaloupes, which are grown mainly for local markets in this State, are not listed.

Because of the wide range in Florida climatic and soil conditions, the rules for growing one crop in the southern part of the State do not always apply to growing the same

crop in the central or northern sections of the State. Hence, the information and suggestions given in this table are of only a general nature, and must be properly interpreted when applied to various local conditions.

REFERENCES: Florida Agricultural Experiment Station, Gainesville; Florida State Department of Agriculture, Tallahassee; P. H. Rolfs' "Sub-Tropical Vegetable Gardening," and Wm. Gomme, Duval County Agricultural Agent.

CROP	PRINCIPAL VARIETY	TYPE OF SOIL BEST ADAPTED	AMT. SEED PER ACRE	WHEN TO PLANT	AMOUNT FERTILIZER	DAYS TO MATURE	YIELD PER ACRE	COST PER ACRE	DISTANCE APART ROWS AND IN ROWS	REMARKS
BEANS	Giant Stringless Refugee	Muck; Hammock; Flat woods, well drained; Pine, good quality.	3 pks. to 1 bu.	Jan., Feb., Mar., April, June, (butter varieties)	800 to 1,000 lbs. per acre.	70 days	110 ham-pers.	\$60 to \$85.	3 to 4 ft. 3 to 4 in.	Ready market for late fall and spring crop. In South Florida fall beans sell well.
	Black Valentine Wardwell's Kidney Wax New Davis White Wax Green & Yellow Bountiful Fordhook Lima			Aug. and Sept., (snap varieties)		45 days				
CABBAGE	Jersey Wakefield	Muck; Hammock; Flat woods, well drained; Pine, good quality.	1 lb. sufficient for 2 acres	October, November and January.	1,500 to 2,000 lbs. per acre	90 to 100 days.	100 to 150 crates.	\$75 to \$100.	6 by 3 ft.	Spring crop brings good return.
	Charleston Wakefield Premium Flat Dutch Succession Copenhagen									
CELEY	Golden self-blanching (Ey) Green Top Easy Blanching	Muck; Hammock; Flat woods, well drained.	6 ozs.	August to November	2,000 lbs. per acre and more if necessary	130 days.	600 crates.	\$400 to \$600.	3 ft. by 4 in.	This crop must be carefully handled for the best results.
CUCUMBERS	Improved White Spine Davis Perfect Stay Green	Hammock; Flat Woods, well drained.	2 to 3 lbs.	August, September, October.	500 to 800 lbs. per acre	65 to 75 days.	200 to 300 cukes	\$75 to \$100.	6 by 5 ft.	Easy crop to grow; good local market.
EGG-PLANT	Black Beauty Florida Highbush	Hammock; Flat woods, well drained; Pine, good quality.	6 ozs.	January (spring crop) July (fall crop)	2,000 lbs. per acre.	140 days.	400 crates	\$125.	5 by 3 ft.	Good, profitable shipping crop. Ready market.

LETTUCE	Big Boston Cream Butter Romaine Iceburg	Muck, Ham- mock; Flat woods, high drained.	2 lbs.	September to December	3,000 lbs. per acre.	60 days.	600 to 700 crates	\$150.	14 by 14 in.	Good drainage essen- tial and land should not be sour.
ONIONS	Crystal Wax White Bermuda Australian Brown Red Bermuda	Low Hammock; Flat Woods; Pine.	3 to 4 lbs. seed 8 bu. sets	Dec. to Feb. (seed) Jan. to Mar. (sets)	2,000 lbs. per acre.	120 days.	400 to 500 crates.	\$125.	12 by 6 in.	Use well rotted stable manure when able. Nitrate soda can be used when maturing. 100 lbs. to acre.
ENGLISH PEAS	Alaska Extra Early Thomas Laxton Florida McNeil Telephone	Muck; Ham- mock; Flat woods, well quality; Pine, good quality.	80 lbs.	October to March	500 to 800 lbs. per acre.	65 days.	200 hampers.	\$85.	4 ft. by 1 in.	Soil must not be sour. Inoculation of seed ad- visable.
PEPPERS	Ruby King World Beater	Flat Woods, Hammock; Pine, good quality.	½ lb.	July, August (fall) January (spring)	3,000 lbs. per acre.	125 to 140 days.	200 crates.	\$85.	3 ft. by 20 in.	Good fall shipping crop.
POTATOES (Irish)	Spaulding Rose 4 Bliss Triumph Irish Cobbler	Flat Woods, well drained; Hammock; Muck.	10 bu.	December and January	1,500 lbs. to 2,000 lbs. per acre.	70 days.	45 bbls.	\$125.	3 ft. 6 in. by 12 in.	Treat seed before plant- ing. Be prepared to dust or spray with bordeaux preparation.
POTATOES (Sweet)	Porto Rico Big Stem Jersey Triumph Norton Yam Nancy Hall	Pine Lands; Sandy Flat Woods.	8 bu. for draws	April, May, June, July.	600 to 1,000 lbs. per acre.	120 days.	100 to 200 bu.	\$45.	3 ft. by 14 in.	Allow 10,000 slips to acre.
STRAW- BERRIES	Missionary Klondyke	Flat Woods; Hammock.	Single Row 15,000 plants 9x12 in. 35,000 plants	Sept.-Nov.	1,500 lbs. plus 100 lbs. nitrate per acre.	70 days.	1,500 to 2,000 quarts.	\$175 to \$250.	3 ft. by 14 in.	Use stable manure if possible in addition to commercial fertilizer.
SWEET CORN	Adams' Early Crosby's Early Stowell's Evergreen Country Gentleman Howling Mob	Muck; Flat Woods; Ham- mock.	15 lbs.	February, March, April, May.	500 lbs. plus 50 lbs. nitrate soda at tasselling per acre.	70 to 85 days.	30 to 50 crates.	\$25	3 ft. by 9 in.	Run seed through creolin solution to keep off birds. Use half pound arsenate lead powder to six pounds hydrated lime for bud worm.
TOMATOES	Livingston Globe Marglobe Stone Earlana Beauty Bonny Best Norton	Prairie; Ham- mock; Muck; Flat Woods, well drained.	1 lb.	January to March.	1,300 lbs. to 1,500 lbs. per acre.	135 days.	250 crates.	\$100.	4 ft. by 2 ft.	Good commercial mar- ket for first-class mat- erial. Local market good.
WATER- MELONS	Tom Watson Florida Favorite Irish Gray	Pine; Flat Woods, well drained.	2 lbs.	January to March.	1,500 lbs. per acre.	70 to 90 days.	1 carload 2 acres.	\$30 acre	10 ft. by 10 ft.	Treat seed and be pre- pared to dust or spray with nicotine and bor- deaux solution.

## Recent Statistics on Agriculture

(Progressive Farmer)

### COTTON REDUCTION CAMPAIGNS

Since 1895 there have been six well marked campaigns for the reduction of cotton acreage, and in each case there has been a reduction in acreage and an increase in price, as shown by the following table:

1895—Acreage reduced 14.7%; price increased 65%.  
 1905—Acreage reduced 13.1%; price increased 20%.  
 1915—Acreage reduced 14.1%; price increased 66%.  
 1919—Acreage reduced, 7.4%; price increased 29%.  
 1921—Acreage reduced 15.0%; price increased 17%.  
 1927—Acreage reduced 12.5%; price increased 60 to 65%.

### INTEREST RATES ON FIRST MORTGAGE FARM LOANS

State	Commercial Banks Percent	Life Insurance Companies Percent	Federal Land Banks Percent
Virginia .....	6.13	5.36	5.50
North Carolina .....	6.12	5.49	5.50
South Carolina .....	7.88	5.95	5.50
Georgia .....	8.10	6.27	5.50
Florida .....	8.14	7.19	5.50
Kentucky .....	6.40	5.34	5.50
Tennessee .....	7.39	5.50	5.50
Alabama .....	8.04	6.18	5.50
Mississippi .....	7.95	6.21	5.50
Arkansas .....	9.20	6.56	5.50
Louisiana .....	7.99	6.12	5.50
Oklahoma .....	9.09	5.55	5.50
Texas .....	8.77	6.35	5.50
United States .....	6.89	5.36	5.50



**TARIFF ON AGRICULTURAL PRODUCTS**

Act of 1922 (With up-to-date revisions)

**Animals**—Cattle,  $1\frac{1}{2}$ @2c per lb.; horses and mules, worth \$150 or less, \$30 per head; others 20% ad valorem; sheep, \$2 per head; swine,  $\frac{1}{2}$ c per lb.; for breeding, free.

**Breadstuffs**—\*Wheat: 42c per bushel, wheat flour, \$1.04 per cwt.; rye: 15c per bushel, flour and meal, 45c per cwt.; corn or maize: 15c per bushel, grits, flour, etc., 30c per cwt.; oats: 15c per bushel, ground, 45c per cwt.; oatmeal, etc., 80c per cwt.; barley: 20c per bushel, barley malt, 40c per cwt., pearled, flour, etc., 2c per lb.; buckwheat: 10c per cwt, flour and grits,  $\frac{1}{2}$ c per lb.

**Dairy Products**—Butter and butter substitutes, 12c per lb.; cheese and cheese substitutes, 5c per lb, but not less than 25% ad valorem.

**Milk**—Fresh,  $2\frac{1}{2}$ c per gal.; cream, 20c per gal. (with exceptions); preserved or condensed, 1@3c per lb.

**Eggs of Poultry**—8c per doz.; dried, 18c per lb.; frozen or prepared, 6c per lb.

**Hay and Feed**—Hay, \$4 per ton; straw, \$1 per ton; \*bran and shorts,  $7\frac{1}{2}$ % ad valorem; grain hulls, 10c per cwt.

**Feed**—Malt, by-products, \$5 per ton; mixed feeds, 10% ad valorem; grain screenings, 10% ad valorem.

**Meats**—Fresh or frozen—Beef and veal, 3c per lb.; lamb and mutton, 4c per lb. and  $2\frac{1}{2}$ c per lb.; pork, 2c per lb.; all kinds prepared or preserved, not specifically provided for, 20% ad valorem.

**Oils (vegetable)**—Peanut oil, 4c per lb.; cottonseed oil, 3c per lb.; cocoanut oil, crude or refined, 2c per lb.; soybeans,  $2\frac{1}{2}$ c per lb.; olive oil: bulk, not specially provided for,  $6\frac{1}{2}$ c per lb., in containers,  $7\frac{1}{2}$ c per lb.; linseed oil, 3.3c per lb.

**Potatoes**—50c per cwt.; dried,  $2\frac{3}{4}$ c per lb.; flour,  $2\frac{1}{2}$ c per lb.

**Seeds**—Seeds of grass: Alfalfa, red and alsike clover, 4c per lb.; crimson clover, 1c per lb.; white clover, 3c per lb.; other clover, 2c per lb.; millet and spring vetch, 1c per lb.; timothy, hairy vetch and others not provided for, 2c per lb.

## WORLD COTTON PRODUCTION FOR 1926-1927

(In bales of 478 pounds net)

Country	Average 1909-13 Bales	1924 Bales	1925 Bales	1926 Bales	1927 Bales
United States .....	13,033,000	13,628,000	16,104,000	18,618,000	12,842,000
India (a) .....	3,568,000	5,069,000	4,660,000	4,269,000	.....
Egypt .....	1,453,000	1,507,000	1,650,000	1,497,000	1,255,000
Russia .....	905,000	484,000	737,000	756,000	.....
Chosen .....	20,000	121,000	125,000	154,000	.....
Mexico .....	187,000	298,000	202,000	379,000	.....
Anglo-Egyptian Sudan .....	14,000	41,000	110,000	120,000	125,000
Greece .....	17,000	18,000	15,000	35,000	.....
Morocco (French) .....	*	1,000	1,000	1,000	.....
Bulgaria .....	1,000	3,000	2,000	3,000	9,000
Algeria .....	† 1,000	2,000	6,000	6,000	5,000
Ecuador .....	.....	17,000 ‡	6,000 ‡	6,000	.....
Total above countries .....	.....	21,189,000	23,844,000	25,844,000	14,236,000
Estimated world total .....	20,900,000	24,800,000	27,900,000	.....	.....

Official sources and International Institute of Agriculture, except as otherwise stated. (a) First estimate—incomplete. † Average for three years. \* Interpolated. ‡ Unofficial.

# 1926 COST OF PRODUCING COTTON, BY YIELD GROUPS

Yield groups (pounds of lint per acre)	Number of reports	Acres in cotton per farm	Yield per acre (pounds of lint)	Cost per acre										Less value of cotton seed per acre	Net cost of lint	
				Prepare and plant	Cultivate	Harvest and market	Miscellaneous labor	Fertilizer and manure	Seed	Ginning	Land rent	Miscellaneous costs	Total		Per acre	Per pound
60 pounds and under .....	32	50	41	\$3.76	\$4.17	\$2.60	\$0.35	\$1.64	\$1.07	\$0.71	\$4.22	\$1.77	\$20.29	\$0.85	\$19.44	\$0.47
61 to 100 pounds .....	91	68	89	4.16	4.54	4.69	.40	2.09	1.01	1.13	4.55	1.82	24.39	1.82	22.57	.25
101 to 140 pounds .....	114	77	126	3.82	5.02	5.75	.68	2.54	1.14	1.67	5.37	2.34	28.33	2.67	25.66	.20
141 to 180 pounds .....	166	74	164	3.90	5.28	7.18	.40	2.67	1.10	2.05	4.92	2.15	29.65	3.60	26.05	.16
181 to 220 pounds .....	130	58	200	4.02	5.57	8.22	.57	3.55	1.05	2.31	5.15	2.83	33.27	3.71	29.56	.15
221 to 260 pounds .....	200	47	246	4.29	5.74	9.29	.59	4.49	1.09	2.90	4.90	2.86	36.15	4.83	31.32	.13
261 to 300 pounds .....	106	54	292	4.65	6.00	10.99	.67	4.43	1.27	3.77	6.79	2.92	41.49	5.09	36.40	.12
301 to 340 pounds .....	48	68	326	4.61	7.28	11.76	.91	5.13	1.27	3.92	7.49	2.92	45.29	5.34	39.95	.12
341 to 380 pounds .....	46	82	360	4.14	5.88	12.10	.54	5.52	1.15	4.09	6.08	3.19	42.69	6.45	36.24	.10
381 to 420 pounds .....	56	64	400	5.23	7.62	13.59	1.64	6.73	1.49	5.10	8.79	3.95	54.14	7.02	47.12	.12
421 to 460 pounds .....	19	44	447	4.56	6.26	14.14	1.22	8.33	1.23	5.47	9.87	2.51	53.59	8.47	45.12	.10
461 to 500 pounds .....	41	27	493	4.48	6.81	16.89	.68	7.53	1.38	5.71	8.24	3.71	55.43	9.30	46.13	.09
501 pounds and over .....	21	29	582	4.64	7.65	19.23	.83	8.43	1.67	5.89	9.82	4.24	62.40	10.38	52.02	.09

## COTTON PRODUCTION IN THE UNITED STATES—1926-27

Cotton Lint \*

State	Acreage in cultivation		Acreage abandoned after—		Acreage harvested		Yield per acre		Production		Farm price Dec. 1		Total value, basis Dec. 1 farm price	
	June 25, 1926	July 1, 1927	June 25, 1926	July 1, 1927	1926	1927	1926	1927	1926	1927	1926	1927	1926	1927
	1,000 acres	1,000 acres	Pct.	Pct.	1,000 acres	1,000 acres	Lbs.	Lbs.	1,000 bales	1,000 bales	Cents per lb.	Cents per lb.	1,000 dollars	1,000 dollars
Missouri .....	472	294	8.0	4.5	434	281	240	177	218	104	10.0	20.5	10,900	10,660
Virginia .....	95	68	2.0	2.0	93	67	264	230	51	32	11.4	20.0	2,907	3,200
North Carolina .....	2,015	1,748	1.5	1.2	1,985	1,727	292	237	1,213	857	11.5	19.5	69,748	83,558
South Carolina .....	2,716	2,522	2.5	4.0	2,648	2,421	182	145	1,008	735	11.7	19.6	58,968	72,030
Georgia .....	4,025	3,499	1.5	2.5	3,965	3,412	180	154	1,496	1,100	11.1	19.4	83,028	106,700
Tennessee .....	1,178	962	3.0	2.0	1,143	943	145	122	32	17	10.2	19.1	1,632	1,624
Florida .....	108	68	3.0	3.0	105	66	188	175	451	345	10.0	19.0	22,550	32,775
Alabama .....	3,699	3,274	1.3	1.5	3,651	3,225	196	178	1,498	1,200	10.7	19.0	80,143	114,000
Mississippi .....	3,809	3,406	1.5	2.0	3,752	3,338	241	192	1,888	1,340	11.6	20.5	109,504	137,350
Arkansas .....	3,867	3,139	2.0	3.0	3,790	3,045	195	154	1,548	980	11.0	20.2	85,140	98,980
Louisiana .....	2,019	1,608	2.0	3.0	1,979	1,560	200	167	829	545	11.0	19.2	45,595	52,320
Oklahoma .....	5,083	4,187	8.0	18.0	4,676	3,433	181	138	1,773	990	9.7	19.8	85,990	98,010
Texas .....	19,140	16,948	4.0	4.0	18,374	16,270	147	126	5,628	4,280	10.8	19.3	303,912	413,020
New Mexico .....	125	100	4.0	5.0	120	95	299	352	75	70	12.3	19.8	4,612	6,930
Arizona .....	168	138	0.6	1.0	167	137	349	325	122	93	13.3	25.6	8,113	11,904
California .....	167	130	3.0	1.5	162	128	387	352	131	94	14.0	21.0	9,170	9,870
All other .....	44	21	2.3	5.0	43	20	189	166	17	7	9.7	19.1	824	668
United States.....	48,730	42,112	3.4	4.6	47,087	40,168	182.6	152.3	17,977	12,789	10.9	19.6	982,736	1,253,599
Lower Calif.....	135	110	4.0	0.0	130	110	317	217	86	50				

\* December preliminary estimate for 1927.

## Financial Report

### PRINTING QUARTERLY BULLETIN JULY 1, 1926—JULY 1, 1927.

1926		
	By Appropriation .....	\$10,000.00
	Balance .....	26.77
		\$10,026.77
July	3—T. J. Appleyard, 12 M .....	\$ 1,845.60
July	16—T. J. Appleyard, 12 M .....	1,334.00
Aug.	20—Chas. Cottrall (2 Photos) .....	10.00
Oct.	31—W. H. May, P. M. ....	54.69
Dec.	18—T. P. Robinson, 6 Photos .....	17.25
Dec.	18—Harold Fowler, Photos .....	55.55
Dec.	18—The Woodward Studio .....	8.25
1927		
Feb.	1—The Record Co., Color Plates .....	2,553.42
Feb.	22—Walker, Evans & Cogswell, envelopes ...	234.10
March	25—Record Co., Part Payment .....	3,500.00
April	15—D. C. Adams, Photos .....	5.00
June	16—W. H. May, P. M., Pos. Quar. Bulletin .	256.20
June	18—Artercraft Printers, Pecan Bulletin .....	122.25
June	18—Artercraft Printers, Printing Slips .....	28.80
		\$10,025.11
	Balance .....	1.66
		\$10,026.77

### PRINTING QUARTERLY BULLETIN JULY 1, 1927—JULY 1, 1928.

	By Appropriation .....	\$10,000.00
1927		
July	26—The Record Co., Bal. on Quar. ....	\$ 4,819.00
July	28—T. J. Appleyard, Quar. Bulletin Com. for Farmer .....	2,456.00
July	28—T. J. Appleyard, Sup. Bulletin .....	96.00
Aug.	3—Artercraft Printers, Coop. Assn. ....	204.40
Aug.	31—W. H. May, P. M., Quar. Bul. ....	63.53
Sept.	8—E. L. Lord, Grape Bulletin .....	250.00
Nov.	2—Artercraft Printers, Grape Bulletin .....	179.59



1928

Feb.	3—Artercraft Printers, Fla. Gov. ....	55.50
June	20—J. W. Clement Co., Market Charts .....	1,800.00
		<hr/>
	Balance .....	\$ 9,924.02
		<hr/>
		75.98
		<hr/>
		\$10,000.00

## EXPRESS AND TELEGRAMS JULY 1, 1926—JUNE 30, 1927

By Appropriation .....\$ 1,500.00

1926

July	3—Am. Ry. Exp. Co. ....	\$ 18.01
July	3—Sou. Tel. & Conet. Co. ....	19.40
July	10—W. C. Dixon, Frt. & Dray .....	23.35
July	12—W. U. Tel. Co. ....	41.28
July	21—W. C. Dixon .....	43.35
Aug.	1—Am. Ry. Exp. Co. ....	12.46
Aug.	3—W. C. Dixon, Frt. & Drayage .....	6.63
Aug.	1—W. U. Tel. Co. ....	27.26
Aug.	1—Sou. Tel. & Conet. Co. ....	19.05
Aug.	18—W. C. Dixon, Frt. & Drayage .....	19.01
Aug.	18—W. C. Dixon, Frt. & Drayage .....	13.05
Aug.	16—W. C. Dixon, Frt. & Drayage .....	.50
Aug.	21—W. C. Dixon, Drayage on Mail .....	1.50
Aug.	17—W. C. Dixon, Drayage .....	.50
Aug.	18—W. C. Dixon, Drayage .....	6.17
Aug.	27—W. C. Dixon .....	6.81
Sept.	2—Amer. Ry. Exp. Co. ....	38.95
Sept.	2—W. U. Tel. Co. ....	14.54
Sept.	2—Sou. Tel. & Conet. Co. ....	19.05
Sept.	16—W. C. Dixon, Frt. & Dray. ....	5.44
Sept.	22—W. C. Dixon, Drayage .....	.75
Sept.	22—W. C. Dixon, Frt. & Drayage .....	4.80
Oct.	5—Sou. Tel. & Conet. Co. ....	16.70
Oct.	5—Amer. Ry. Exp. Co. ....	5.13
Oct.	13—W. U. Tel. Co. ....	14.01
Oct.	14—W. C. Dixon, Frt. & Dray. ....	24.10
Oct.	16—Amer. Ry. Exp. Co. ....	18.91
Oct.	14—W. C. Dixon, Drayage .....	1.75
Oct.	18—W. C. Dixon, Drayage .....	2.90
Oct.	14—W. C. Dixon, Drayage .....	3.81
Oct.	19—W. C. Dixon, Drayage .....	3.25
Nov.	1—Postal Tel. Co. ....	2.26
Nov.	1—Sou. Tel. & Conet. Co. ....	18.50
Nov.	1—Amer. Ry. Exp. Co. ....	12.09

## 1926

Nov.	1—W. U. Tel. Co. ....	10.07
Nov.	10—W. C. Dixon, Frt. & Dray. ....	31.34
Nov.	20—W. C. Dixon, Frt. & Dray. ....	17.52
Dec.	1—Postal Tel. Co. ....	2.25
Dec.	1—Amer. Ry. Exp. Co. ....	26.94
Dec.	1—Sou. Tel. & Conet. Co. ....	16.50
Dec.	1—W. U. Tel. Co. ....	2.82
Dec.	10—W. U. Tel. Co. ....	5.85
Dec.	10—W. C. Dixon, Frt. & Dray. ....	9.75
Dec.	18—W. C. Dixon, Drayage ....	4.31
Dec.	23—W. C. Dixon, Drayage ....	7.88

## 1927

Jan.	1—Postal Tel. Co. ....	2.04
Jan.	1—Amer. Ry. Exp. Co. ....	29.85
Jan.	1—Sou. Tel. & Conet. Co. ....	21.20
Jan.	1—W. U. Tel. Co. ....	15.63
Feb.	1—Sou. Tel. & Conet. Co. ....	22.80
Feb.	1—Amer. Ry. Exp. Co. ....	18.89
Feb.	1—Postal Tel. Co. ....	6.61
Feb.	1—W. U. Tel. Co. ....	14.27
Feb.	14—Postal Tel. Co. ....	3.81
Feb.	14—W. C. Dixon, Drayage ....	3.50
Feb.	22—W. C. Dixon, Frt. & Dray. ....	15.77
Feb.	22—W. C. Dixon, Drayage ....	4.05
March	1—Sou. Tel. & Conet. Co. ....	23.30
March	1—Amer. Ry. Exp. Co. ....	16.43
March	1—Postal Tel. Co. ....	4.11
March	1—W. U. Tel. Co. ....	3.25
March	17—W. C. Dixon, Frt. & Dray. ....	21.22
March	22—W. C. Dixon, Frt. & Dray. ....	9.83
March	30—W. C. Dixon, Drayage ....	1.00
April	1—Amer. Ry. Exp. Co. ....	3.62
April	1—Sou. Tel. & Conet. Co. ....	24.10
April	1—Postal Tel. Co. ....	1.89
April	6—W. C. Dixon, Drayage ....	2.00
April	12—W. U. Tel. Co. ....	15.20
April	18—W. C. Dixon, Drayage ....	7.00
April	21—W. C. Dixon, Drayage ....	4.07
April	27—W. C. Dixon, Drayage ....	2.00
May	3—W. C. Dixon, Drayage ....	1.19
May	3—Sou. Tel. & Conet. Co. ....	29.20
May	3—Amer. Ry. Exp. Co. ....	14.17
May	3—Postal Tel. Co. ....	9.61
May	3—W. U. Tel. Co. ....	11.20
May	3—W. C. Dixon, Dray. ....	3.30

## 1927

May	10—W. C. Dixon, Dray. ....	8.22
May	11—W. C. Dixon, Dray. ....	3.00
May	11—W. C. Dixon, Dray. ....	3.73
May	16—W. C. Dixon, Drayage ....	7.03
May	27—W. C. Dixon, Dray. ....	1.50
May	27—W. C. Dixon, Dray. ....	3.07
May	27—G. R. Leonard & Co., Sub. to Popu. ....	15.00
June	2—Sou. Tel. & Conet. Co. ....	28.15
June	2—W. C. Dixon, Frt. & Dray. ....	39.63
June	2—Postal Tel. Co. ....	1.93
June	24—W. H. May, P. M., Reviews ....	5.90
June	24—W. C. Dixon, Drayage ....	1.50
June	30—Western Union ....	24.76
June	13—W. C. Dixon, Drayage ....	2.54
June	30—Amer. Ry. Exp. Co. ....	62.77
June	30—Sou. Tel. & Conet. Co. ....	24.85
June	30—W. U. Tel. Co. ....	35.83
June	30—Amer. Ry. Exp. Co. ....	24.37
June	30—Postal Tel. Co. ....	16.56

\$ 1,276.95

EXPRESS AND TELEGRAMS JULY 1, 1927 TO JUNE 30,  
1928.

July 1—By Appropriation .....\$ 1,500.00

## 1927

July	5—Sou. Tel. & Conet. Co. ....	\$ 24.85
July	5—Amer. Ry. Exp. Co. ....	24.37
July	5—Western Union Co. ....	35.83
July	7—Postal Tel. Co. ....	16.56
July	8—W. C. Dixon ....	.50
Aug.	3—Sou. Tel. & Conet. Co. ....	15.25
Aug.	3—Postal Tel. Co. ....	16.08
Aug.	4—Western Union Co. ....	17.07
Aug.	5—Amer. Ry. Exp. Co. ....	34.85
Aug.	3—T. J. Hicks, Jr. ....	1.50
Sept.	1—Sou. Tel. Conet. Co. ....	17.85
Sept.	1—Amer. Ry. Exp. Co. ....	51.87
Sept.	1—Western Union Co. ....	25.25
Sept.	1—Postal Tel. Co. ....	6.14
Sept.	12—W. C. Dixon ....	1.00
Oct.	1—Sou. Tel. & Conet. Co. ....	32.30
Oct.	1—Western Union Co. ....	30.15
Oct.	1—Postal Tel. & Cable Co. ....	12.32
Oct.	1—Amer. Ry. Exp. Co. ....	47.49

## 1927

Oct.	29—W. C. Dixon .....	6.96
Nov.	2—Sou. Tel. & Conet. Co. ....	26.20
Nov.	2—Western Union Tel. Co. ....	48.13
Nov.	2—Postal Tel. Co. ....	5.21
Nov.	2—Amer. Ry. Exp. Co. ....	86.09
Dec.	3—Western Union Co. ....	42.59
Dec.	3—Postal Tel. Co. ....	7.63
Dec.	3—Sou. Tel. & Conet. Co. ....	19.25
Dec.	8—Amer. Ry. Exp. Co. ....	39.87

## 1928

Jan.	4—Western Union Co. ....	19.66
Jan.	4—Postal Tel. Co. ....	1.97
Jan.	4—Amer. Ry. Exp. Co. ....	24.79
Jan.	4—Sou. Tel. & Conet. Co. ....	16.05
Jan.	1—W. C. Dixon .....	1.00
Feb.	1—Amer. Ry. Exp. Co. ....	34.26
Feb.	1—Amer. Ry. Exp. Co. ....	3.17
Feb.	1—Western Union Tel. Co. ....	47.88
Feb.	1—Postal Tel. Co. ....	12.81
Feb.	1—Sou. Tel. & Conet. Co. ....	27.60
Feb.	14—Matthews Northrop Co. ....	4.58
Feb.	14—Matthews Northrop Co. ....	6.97
Feb.	29—W. C. Dixon .....	1.00
March	1—Sou. Tel. & Conet. Co. ....	25.05
March	1—Amer. Ry. Exp. Co. ....	16.70
March	1—Postal Tel. Co. ....	6.28
March	1—Western Union Co. ....	44.54
March	23—Foster Reynolds Co. ....	4.40
March	12—W. C. Dixon .....	1.25
April	1—Sou. Tel. Conet. Co. ....	19.30
April	1—Postal Tel. Co. ....	8.42
April	1—Amer. Ry. Exp. Co. ....	23.07
April	1—Western Union Co. ....	110.98
May	2—Amer. Ry. Exp. Co. ....	27.82
May	2—Postal Tel. Co. ....	3.94
May	2—Western Union Co. ....	18.55
May	14—Sou. Tel. & Conet. Co. ....	28.40
May	23—W. C. Dixon .....	1.50
June	1—Amer. Ry. Exp. Co. ....	26.77
June	1—Sou. Tel. & Conet. Co. ....	27.50
June	1—Postal Tel. Co. ....	4.29
June	1—Western Union Co. ....	14.61

Total ..... \$ 1,308.27

## POSTAGE JULY 1, 1926—JUNE 30, 1927.

1926			
		Balance .....	\$ 15.86
July	1—	By Appropriation .....	\$ 1,800.00
Aug.	24—	W. H. May, Stamps .....	\$ 1,540.00
1927			
Jan.		—W. H. May, Review .....	4.82
Jan.		—W. H. May, Quarterly Bulletin .....	56.46
Feb.	2—	W. H. May, Stamped Envelopes .....	207.18
March	3—	W. H. May, Review .....	5.13
March	25—	W. H. May, 1½c Stamps .....	2.27
			<hr/>
			\$ 1,815.86

## POSTAGE JULY 1, 1927—JUNE 30, 1928.

		By Appropriation .....	\$ 2,500.00
July	17—	W. H. May, P. M. ....	\$ 2,000.00
Aug.	12—	W. H. May, P. M. ....	20.00
Aug.	13—	Jno. B. Mullan .....	.22
Aug.	24—	R. C. Sheaffer .....	.50
Aug.	31—	O. W. Pittman .....	.98
Sept.	6—	J. J. Kiely .....	.98
Sept.	20—	H. E. Ross .....	2.60
Jan.	30—	W. H. May, P. M. ....	230.20
May	2—	W. H. May, P. M. ....	50.00
May	23—	W. H. May, P. M. ....	194.52
			<hr/>
		Total .....	\$ 2,500.00

STATIONERY AND CONTINGENT FUND JULY 1, 1926—  
JUNE 30, 1927.

		By Appropriation .....	\$ 1,650.00
1926			
July	6—	D. A. Dixon Co. ....	\$ 13.00
July	6—	Geo. D. Barnard .....	43.25
July	7—	Leon Elec. Co. ....	8.40
July	7—	Capital Office Sup. Co. ....	4.00
July	7—	Capital Office Sup. Co. ....	.30
July	7—	Capital Office Sup. Co. ....	3.00
July	7—	Photostat Corp. Co. ....	15.00
Aug.	1—	D. A. Dixon Co. ....	30.75
Aug.	1—	Capital Office Sup. Co. ....	3.00
Aug.	1—	Leon Elec. Sup. Co. ....	3.95
Aug.	1—	Bass Hdwd. Co. ....	.50



## 1926

Aug.	23—Industrial School for Boys .....	5.00
Aug.	24—Geo. D. Barnard .....	168.58
Aug.	20—Capital Office Sup. Co. ....	1.35
Aug.	7—Capital Office Sup. Co. ....	51.28
Aug.	31—D. A. Dixon Co. ....	11.75
Sept.	3—Leon Elec. Co. ....	.60
Sept.	3—P. W. Wilson Co. ....	5.70
Sept.	1—Walker, Evans & Cogswell .....	9.60
Sept.	3—Royal Typewriter Co. ....	50.53
Sept.	3—Tallahassee Typewriter Exchange .....	10.00
Sept.	10—Walker, Evans & Cogswell .....	159.88
Sept.	16—Walker, Evans & Cogswell .....	6.21
Sept.	27—W. A. Bass Hardware Co. ....	.50
Oct.	5—Tallahassee Typewriter Exchange .....	10.00
Oct.	5—Capital Office Supply Co. ....	4.00
Oct.	5—D. A. Dixon Co. ....	7.00
Oct.	5—D. A. Dixon Co. ....	1.40
Oct.	5—Capital Office Supply Co. ....	2.20
Oct.	1—Leon Electric Co. ....	7.60
Oct.	8—Bass Hardware Co. ....	.75
Oct.	30—Maxwell's Pharmacy .....	.75
Nov.	1—Rhodes Hardware Co. ....	4.25
Nov.	5—Walter Scott .....	7.00
Nov.	3—Capital Office Supply Co. ....	8.20
Nov.	22—Capital Office Supply Co. ....	8.65
Nov.	19—Capital Office Supply Co. ....	.55
Dec.	1—Capital Office Supply Co. ....	2.50
Dec.	1—Bass Hardware Co. ....	.10
Dec.	1—Maxwell's Pharmacy .....	1.25
Dec.	2—Clark's Jewelry .....	1.25
Dec.	6—D. A. Dixon Co. ....	27.55
Dec.	10—Quarterman Electric Co. ....	8.25
Dec.	10—Capital Office Supply Co. ....	2.00
Dec.	18—Capital Office Supply Co. ....	8.00
Dec.	18—Capital Office Supply Co. ....	1.15
Dec.	18—Walker, Evans & Cogswell .....	5.00
Dec.	23—Walker, Evans & Cogswell .....	5.00
Dec.	23—Royal Typewriter Co. ....	7.50
Dec.	7—P. W. Wilson Co. ....	11.40

## 1927

Jan.	6—D. A. Dixon Co. ....	3.00
Jan.	4—Capital Office & Supply Co. ....	14.00
Jan.	1—Leon Electric Supply Co. ....	.80
Jan.	1—Hill's Book Store .....	1.20
Jan.	1—Loomis Studio .....	64.98
Jan.	13—Geo. D. Barnard Stationery Co. ....	3.10

1927

Jan.	19—T. J. Appleyard .....	.60
Jan.	12—T. J. Appleyard .....	2.15
Jan.	16—Underwood Typewriter Co. ....	4.00
Jan.	13—Capital Office & Supply Co. ....	8.60
Jan.	22—W. H. Wehunt .....	6.15
Jan.	22—Underwood Typewriter Co. ....	91.64
Jan.	26—T. J. Appleyard .....	8.40
Jan.	8—Leon Electric Supply Co. ....	1.50
Feb.	2—D. A. Dixon Co. ....	33.45
Feb.	2—W. H. Wehunt .....	10.10
Feb.	14—T. J. Appleyard .....	7.65
Feb.	14—Geo. D. Barnard Co. ....	6.54
Feb.	14—Supt. of Documents, Gov. Pt. Office .....	1.25
Feb.	19—T. J. Appleyard .....	5.50
Feb.	28—United Office Supply Shop .....	1.85
Feb.	28—Maxwell's Pharmacy .....	1.00
March	1—T. J. Appleyard .....	72.50
March	1—T. J. Appleyard .....	.45
March	1—T. J. Appleyard .....	2.70
March	1—T. J. Appleyard .....	2.00
March	1—T. J. Appleyard .....	2.25
March	4—Quarterman Electric Co. ....	6.26
March	4—Pichard Bros. ....	.20
March	7—Dixon & Co. ....	70.10
March	10—Florida State News .....	9.00
March	10—Walker, Evans & Cogswell .....	19.00
March	15—Walker, Evans & Cogswell .....	9.39
March	1—Industrial School for Boys .....	10.00
March	18—National Geographic Magazine .....	3.50
March	22—Walker, Evans & Cogswell .....	2.85
March	25—Pichard Bros. ....	.30
March	10—W. H. May, P. M. ....	4.85
April	1—Tallahassee Typewrite Exchange .....	1.50
April	4—Sanford Herald .....	3.50
April	4—Gainesville Sun .....	1.75
April	4—Bass Hardware Co. ....	.60
April	4—Tallahassee Typewriter Exchange .....	4.50
April	4—D. A. Dixon Co. ....	26.30
April	4—T. J. Appleyard .....	31.60
April	6—P. W. Wilson Co. ....	6.00
April	12—Zephyrhills News .....	2.00
April	12—Grant Furniture Co. ....	2.00
April	14—Industrial School for Boys .....	13.50
May	3—Walker, Evans & Cogswell .....	11.25
May	3—Bass Hardware Co. ....	1.75
May	3—T. J. Appleyard .....	74.11

1927

May	3—D. A. Dixon Co. ....	17.00
June	2—D. A. Dixon Co. ....	95.05
June	2—T. J. Appleyard ....	28.00
June	2—Old Dutch Carbon Co. ....	18.00
June	2—Walker, Evans & Cogswell ....	26.58
June	30—Leon Electric Co. ....	27.25
June	9—Bruno Riese ....	6.00
June	30—D. A. Dixon Co. ....	4.00
June	30—Van Brunt & Yon Hardware Co. ....	1.65
June	30—W. L. Marshall ....	2.50
June	30—Fain Drug Co. ....	.25

\$ 1,648.13

Balance dropped ..... 1.87

STATIONERY & CONTINGENT JULY 1, 1927—JUNE 30,  
1928.

1927

	By Appropriation .....	\$ 2,000.00
July	1—Walker, Evans & Cogswell .....	\$ 121.00
July	26—Walker, Evans & Cogswell .....	5.60
July	28—T. J. Appleyard .....	9.35
Aug.	3—H. Clay Crawford .....	1.60
Aug.	3—Tallahassee Typewriter Exchange .....	7.50
Aug.	3—Bass Hardware Co. ....	.50
Aug.	3—P. W. Wilson Co. ....	2.50
Aug.	10—D. A. Dixon Co. ....	80.70
Aug.	24—Underwood Typewriter Co. ....	65.05
Aug.	31—Industrial School for Boys .....	16.00
Sept.	1—Walker, Evans & Cogswell .....	16.61
Sept.	1—Leon Electric Supply Co. ....	4.65
Sept.	1—Tallahassee Typewriter Exchange .....	1.50
Sept.	1—D. A. Dixon Co. ....	46.35
Sept.	6—Quarterman Electric Co. ....	14.08
Sept.	6—Geo. D. Barnard Co. ....	47.17
Sept.	29—Walker, Evans & Cogswell Co. ....	9.00
Oct.	12—Industrial School for Boys .....	30.25
Oct.	12—Seabrook Hardware Co. ....	1.60
Oct.	22—T. J. Appleyard Co. ....	1.00
Nov.	2—Leon Electric Co. ....	.80
Nov.	2—Williams & Harrell .....	17.50
Nov.	2—G. M. Store .....	2.50
Nov.	2—Tallahassee Typewriter Exchange .....	3.00
Nov.	8—W. L. Marshall .....	5.00
Nov.	21—Market Growers Journal .....	8.75

1927		
Nov.	12—Hicks Drug Store .....	.60
Nov.	1—Underwood Typewriter Co. ....	60.05
Dec.	1—D. A. Dixon Co. ....	73.80
Dec.	3—Leon Electric Co. ....	7.32
Dec.	14—Quartermen Electric Co. ....	6.30
Dec.	14—W. L. Marshall .....	2.00
Dec.	14—Craig & Co. ....	5.00
Dec.	16—W. H. May, P. M. ....	15.10
1928		
Jan.	4—Quartermen Electric Co. ....	1.05
Jan.	3—Mailing Review .....	9.41
Jan.	3—G. M. Store .....	2.00
Jan.	3—Walker, Evans & Cogswell .....	14.16
Jan.	31—P. W. Wilson .....	2.90
Jan.	20—The MacMillan Co. ....	1.41
Jan.	13—Bass Hardware Co. ....	1.10
Jan.	17—Dixie Engraving Co. ....	27.35
Jan.	21—H. & W. B. Drew Co. ....	7.15
Jan.	30—Maxwell's Pharmacy .....	.75
Feb.	1—T. J. Appleyard .....	53.03
Feb.	1—D. A. Dixon Co. ....	132.94
Feb.	1—Artercraft Printers .....	3.50
Feb.	14—W. L. Marshall .....	3.25
March	1—The Surprise Store .....	4.05
March	1—Underwood Typewriter Co. ....	17.00
March	1—D. A. Dixon Co. ....	47.11
March	1—T. J. Appleyard Co. ....	15.20
March	2—Craig & Co. ....	9.00
March	23—Geo. D. Barnard Co. ....	14.06
March	23—H. & W. B. Drew Co. ....	11.80
April	3—Frankel Manufacturing Co. ....	24.00
April	3—Underwood Typewriter Co. ....	9.25
April	3—Walker, Evans & Cogswell .....	17.00
April	3—D. A. Dixon Co. ....	20.29
April	3—T. J. Appleyard .....	21.20
May	2—T. J. Appleyard .....	9.00
May	2—H. & W. B. Drew Co. ....	4.00
May	2—The Surprise Store .....	5.00
May	2—D. A. Dixon Co. ....	3.75
May	25—The Record Co. ....	26.00
May	25—H. & W. B. Drew Co. ....	63.00
June	1—T. J. Appleyard .....	26.10
June	1—The Surprise Store .....	5.00
June	1—Addressograph Sales Co. ....	5.85
June	1—P. W. Wilson Co. ....	.50
June	1—D. A. Dixon Co. ....	19.86

1928

June	18—Industrial Boys School .....	58.25
June	20—D. A. Dixon Co. ....	45.88
June	30—D. A. Dixon Co. ....	61.00
June	30—R. W. Duval .....	1.75
June	30—T. J. Appleyard .....	218.27

Total, July 1, 1927—July 1, 1928 .....\$ 1,712.45

Balance Dropped ..... 287.55

## TRAVEL EXPENSE COMMISSIONER OF AGRICULTURE

JULY 1, 1926—JUNE 30, 1927.

	By Appropriation .....	\$ 1,000.00
July	15—Trip to State Farm .....	\$ 36.54
Aug.	3—Trip to Miami and Ocala .....	71.84
Aug.	25—Trip to Inspect Prisons .....	39.08
Sept.	9—Trip to Raiford and Ocala .....	11.53
Sept.	29—Trip to Orlando .....	36.86
Oct.	25—Trip to Haines City .....	148.44
Nov.	20—Trip to Ocala, Leesburg, Jacksonville, etc.	80.48
Dec.	2—Trip to Jacksonville, Ocala .....	64.28
Dec.	15—Trip to Miami .....	157.45
Jan.	22—Trip to Raiford, Jacksonville .....	19.24
Feb.	2—Trip to Raiford, Lake City .....	32.81
April	7—Trip to Orlando .....	37.28
April	13—Trip to Orlando .....	59.61
April	21—Trip to Washington .....	145.86
May	3—Trip to Orlando, Ocala .....	53.77

\$ 995.07

Balance Dropped ..... 4.93

JULY 1, 1927—JUNE 30, 1928.

	By Appropriation .....	\$ 1,800.00
July	1—Trip to Raiford, Ocala, Orlando .....	75.61
July	1—Trip to California .....	448.60
Aug.	6—Trip to Wacissa .....	10.80
Aug.	17—Trip to Greenville .....	141.60
Sept.	2—Trip to St. Petersburg .....	29.60
Sept.	8—Trip to Live Oak .....	18.00
Sept.	28—Trip to Jacksonville and Ocala .....	40.60
Sept.	25—Trip to Ocala and Raiford .....	23.60
Nov.	14—Trip to Tallahassee and Madison .....	18.30
Nov.	8—Trip to Ocala and Leesburg .....	7.20
Nov.	22—Trip to Everglades .....	93.75
Dec.	8—Trip to State Fair, Jacksonville .....	26.80
Dec.	20—Trip to Raiford, Orlando, Bonifay .....	94.44



1928		
Jan.	12—Trip to Pensacola and West Florida . . . .	98.60
Jan.	24—Trip to Ocala, State Cham. of Com. . . . .	13.45
Feb.	1—Trip to Belleview, Winter Haven, Tampa . . . .	96.28
Feb.	14—Trip to Tampa Fair . . . . .	84.95
Feb.	16—Trip to Round Lake . . . . .	20.15
March	23—Trip to Bay Mabel, Jacksonville, Orlando, Sarasota, Babson Park and Haines City . . . .	167.29
May	5—Trip to Tavares, Winter Haven . . . . .	88.91
June	18—S. A. L. Ry. Co., 5 Script Books . . . . .	150.00
June	28—S. A. L. Ry. Co., 2 Script Books . . . . .	45.00
		<hr/>
		\$ 1,793.53
Balance Dropped . . . . .		6.47

## ADVERTISING FUND JULY 1, 1926 TO JUNE 30, 1927

Appropriation .....	\$50,000.00
Contracted for .....	199.35
Sale of Maps .....	85.25
	<hr/>
	\$50,284.60
Printing .....	\$24,051.00
Salaries .....	10,634.13
Advertisements .....	8,958.00
Postage .....	2,553.54
Stationery .....	1,679.06
General .....	1,136.48
Travel Expense .....	953.27
Newspaper Subscriptions .....	318.55
	<hr/>
	\$50,284.03
Balance Dropped .....	.57

## ADVERTISING FUND JULY 1, 1927 TO JUNE 30, 1928

Appropriation .....	\$75,000.00
Salaries .....	\$12,833.62
Printing .....	11,737.32
Advertisements .....	6,379.86
General .....	2,109.79
Travel Expense .....	1,535.32
Postage .....	828.22
Newspapers .....	722.02
Stationery .....	766.10
	<hr/>
	\$36,912.25
Contracted for .....	38,087.75
	<hr/>
Total .....	\$75,000.00

## Advertising Fund

**U**NDER the law the Advertising Appropriation is expended through the Bureau of Immigration in the Department of Agriculture. We are now in the fourth year of this work.

Within the biennial period from July 1st, 1926 to June 30th, 1928, in response to advertising placed in periodicals having a combined circulation of 4,247,529, the Bureau of Immigration has received inquiries by mail totaling 33,462. The periodicals carrying these advertisements were for the most part agricultural although other advertising media were used, including industrial, educational and literary publications. In addition, approximately 5,000 inquiries about the State were received through the Ask Mr. Foster Service.

In response to these requests, thousands of letters were sent to people all over the United States and many were written to citizens of other countries. Literature giving facts about the State, sectional maps, highway maps and information of various kinds on scores of subjects were mailed to all those who applied. In all, the Bureau of Immigration, in the two year period, mailed 339,000 pieces of literature to those who expressed an interest in the State. In weight, this represented several tons.

Mimeographed lists containing the names and addresses of those individuals who had asked for information about Florida were mailed from time to time to the various chambers of commerce, boards of trade, newspapers, banks, county agents, home demonstration agents and other public officials, workers and agencies throughout the State. It was the object of this service to enable each community in the State to follow up our advertising by correspondence with the person who had expressed, or might have, an interest in that particular section. Some very gratifying results have come to our attention as a result of the co-operation between the Bureau of Immigration and various organizations working to upbuild their respective communities.

In the preceding biennium we began in a very modest way the publication of **FLORIDA REVIEW**, a small periodical which was made up of items of general interest about the State clipped from the Florida papers for which we subscribed. By carefully selecting this material so that it would be representative of every section, city, industry and notable advancement in all lines of endeavor, we have sought to give a semi-monthly, fact-stating summary of the State's progress. Our efforts in this direction seem to have won recognition, as the circulation of **FLORIDA REVIEW** has steadily increased and many people have written to us commending the publication.

A portion of the advertising fund was expended for printing the report of the Industrial Survey. This survey was authorized by the Legislature of 1927 for the purpose of collecting data as to the commercial, industrial, agricultural and other resources of the State. The report makes up a volume of approximately 350 pages and is a comprehensive and informative work.

It is impossible within the compass of this report to detail the work done by the Bureau of Immigration in advertising the State. No attempt has at any time been made to advertise our work. We have expended the appropriation entrusted to us with the best judgment and ability at our command and we sincerely feel that the results justify the action of past Legislatures in providing funds for the venture. It might not be out of place to say here that other States have followed the example of Florida and are now advertising their resources and inviting new settlers into their borders.

Below is a table giving figures relative to publications distributed by the Bureau of Immigration during the biennium:

(July 1, 1926—June 30, 1928)

Comparative Data .....	120,000
Florida Data .....	20,000
Interesting Facts .....	20,000
Latitude Maps .....	5,000
Blackberry Bulletin .....	2,000
Pineapple Bulletin .....	1,000
Squab Bulletin .....	1,000
Handbook for Florida Growers and Shippers .....	20,000
Florida Facts .....	70,000
Agricultural Statistics .....	2,000
All Florida .....	30,000
FLORIDA REVIEW .....	48,000
Total .....	339,000

The attention of the reader is directed to that portion of the financial report of the Department relating to the Bureau of Immigration. It will be noted that a goodly part of the appropriation of the previous year was contracted but not expended. The fiscal year of July 1, 1928 to June 30, 1929, will show the purpose for which this amount was expended.